

NON PROTÉGÉ / UNPROTECTED

ORIGINAL

CMD: 18-H107

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Un remplacement de permis

A Licence Replacement

**Laboratoires Nucléaires
Canadiens Limitée**

**Canadian Nuclear
Laboratories Limited**

**Mémoire du personnel de
la CCSN sur la demande
des LNC concernant la
séparation du permis
pour Douglas Point,
Gentilly-1 et le réacteur
nucléaire de
démonstration en trois
permis**

**Submission from CNSC
Staff on CNL's
Application to Separate
the Licence for Douglas
Point, Gentilly-1 and
Nuclear Power
Demonstration into Three
Licences**

Audience fondée uniquement sur des
mémoires

Hearing in writing based solely on
written submissions

Prévue pour :
Décembre 2018

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December 2018

Soumise par :
Le personnel de la CCSN

Submitted by:
CNSC Staff

Résumé

Le présent CMD comprend de l'information sur un ensemble de questions qui présentent un intérêt réglementaire concernant les activités des Laboratoires Nucléaires Canadiens :

- la demande des LNC visant à séparer le permis unique qui couvre les installations de gestion des déchets de Douglas Point, de Gentilly-1 et du réacteur nucléaire de démonstration en trois permis distincts pour chacun de ces sites, sans modification aux autorisations ni à la date d'expiration

Le personnel de la CCSN recommande à la Commission de prendre les mesures suivantes :

- modifier le permis WFDL-W4-332.01/2034 afin qu'il s'applique uniquement au site de Douglas Point, sans modification aux autorisations pour ce site ni à la date d'expiration, et
- délivrer un nouveau permis de déclasser d'une installation de gestion des déchets (WFDL) pour chacune des installations de gestion des déchets de Gentilly-1 et du réacteur nucléaire de démonstration, qui seront valides jusqu'au 31 décembre 2034 et comprendront des autorisations identiques pour ces sites à celles actuellement indiquées dans le permis WFDL-W4-332.01/2034

Les pièces suivantes sont jointes :

- Les permis proposés et l'ébauche des manuels des conditions de permis
- Le permis actuel et le Manuel des conditions de permis actuel

Summary

This CMD presents information about the following matters of regulatory interest with respect to Canadian Nuclear Laboratories activities:

- CNL's application to separate the single licence covering the Douglas Point, Gentilly-1 and Nuclear Power Demonstration Waste Facilities into one licence for each site, with no changes to any authorizations or to the expiry date

CNSC staff recommend the Commission take the following actions:

- Amend WFDL-W4-332.01/2034 so that it applies to the Douglas Point site only, with no change to any authorizations for that site or to the expiry date, and
- Issue a new Waste Facility Decommissioning Licence (WFDL) for each of the Gentilly-1 and Nuclear Power Demonstration Waste Facilities, valid until December 31, 2034, and with identical authorizations for those sites as are currently found in WFDL-W4-332.01/2034

The following items are attached:

- The proposed Licences and draft Licence Conditions Handbooks
- The current Licence and Licence Conditions Handbook

Signé le / Signed

12 décembre 2018



Haidy Tadros

Directrice générale de la

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Director General

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Énergie atomique du Canada limitée (EACL) est propriétaire de trois réacteurs prototypes partiellement déclassés : Douglas Point (DP), Gentilly-1 (G-1) et le réacteur nucléaire de démonstration (NPD). Ces anciens réacteurs nucléaires ont tous cessé leurs opérations dans les années 1980 et sont depuis maintenus en état de stockage sous surveillance, en attendant leur déclasserement actif.

Après leur fermeture, les sites des réacteurs DP, G-1 et NPD ont chacun reçu un permis d'exploitation d'une installation de gestion des déchets pour une période indéfinie. En 2014, les permis couvrant ces trois sites ont été fusionnés pour créer un seul permis, WFDL-W4-332.00/2034, à la demande d'EACL. À ce moment, la date d'expiration du 31 décembre 2034 a été établie. Le permis fusionné a par la suite été transféré d'EACL aux Laboratoires Nucléaires Canadiens (LNC) sous le numéro WFDL-W4-332.01/2034, dans le cadre de la transition des opérations d'EACL vers un modèle d'organisme gouvernemental exploité par un entrepreneur (OGEE). Depuis ce temps, les LNC ont effectué des travaux limités de réduction des dangers sur les trois sites, conformément à ce qu'autorise le permis.

Depuis la transition au modèle d'OGEE, les LNC ont élaboré des stratégies de déclasserement distinctes pour chacun des sites des réacteurs DP, G-1 et NPD. Cette situation est illustrée par l'approche de déclasserement accéléré proposée par les LNC pour le site du réacteur NPD qui, si elle est autorisée par la Commission, verrait les travaux de déclasserement sur ce site se terminer des décennies plus tôt que prévu. Ces différents échéanciers de déclasserement rendent difficile l'administration d'un seul permis qui couvre les trois sites des réacteurs DP, G-1 et NPD.

En juillet 2018, les LNC ont présenté une demande à la Commission en vue de séparer le permis en trois, soit un permis pour chacun des sites des réacteurs DP, G-1 et NPD, sans apporter de modification aux autorisations ni à la date d'expiration. Les LNC demandent cette séparation du permis afin de pouvoir plus facilement adopter des échéanciers et des stratégies de déclasserement différents pour les trois sites.

Puisque les LNC ne demandent aucune modification aux autorisations ni à la date d'expiration, le personnel de la CCSN considère que la demande des LNC visant à séparer le permis WFDL-W4-332.01/2034 ne constitue pas des modifications de fond. Le personnel de la CCSN conclut que la séparation des permis pour les réacteurs DP, G-1 et NPD permettra d'accroître la transparence pour le public en favorisant des discussions qui seront davantage ciblées sur les plans individuels des LNC pour chaque site. Le personnel de la CCSN appuie la demande des LNC compte tenu de la plus grande transparence qui sera offerte et de l'avantage d'une administration appropriée des plans de déclasserement.

Tel que mentionné ci-dessus, les LNC ont soumis en 2016 au personnel de la CCSN une description de projet qui explique les plans de déclassement du site du réacteur NPD selon un calendrier accéléré et avec les structures importantes laissées sur place. Il est important de noter que l'approche de déclassement accéléré proposée par les LNC à l'égard du réacteur NPD ne fait pas partie de la portée de cette demande visant à séparer le permis fusionné.

Le public peut obtenir sur demande les documents mentionnés dans le présent document à l'intention des commissaires (CMD).

PARTIE UN

Le présent document aux commissaires (CMD) est présenté en deux parties.

La Partie Un comprend :

1. Un aperçu du sujet présenté
2. Les conclusions et les recommandations générales
3. Une discussion sur d'autres questions d'ordre réglementaire
4. Des addenda qui complètent les éléments 1 à 3

La Partie Deux présente toute l'information disponible ayant trait expressément au permis actuel et au permis proposé.

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1. APERÇU

1.1 Contexte

EACL est propriétaire de trois réacteurs prototypes partiellement déclassés : le réacteur DP à Tiverton, en Ontario, le réacteur G-1 à Bécancour, au Québec et le réacteur NPD à Rolphton, en Ontario. Ces trois anciens réacteurs ont cessé leurs opérations dans les années 1980, auquel moment EACL a mis en place une approche progressive pour le déclasserment de chaque installation. Cette approche comprend trois phases : à la phase 1, chaque installation est placée en état d'arrêt sûr; à la phase 2, les installations sont maintenues en état de stockage sous surveillance, habituellement pour permettre la désintégration radioactive; et à la phase 3, un déclasserment actif est effectué pour atteindre l'état final de chaque site.

Les sites des réacteurs DP, G-1 et NPD se trouvent actuellement tous à la phase 2, soit l'état de stockage sous surveillance. Chaque site comprend un réacteur prototype partiellement déclassé avec les structures associées. Une description complète de ces sites est incluse dans le CMD 18-M30 [1], qui a été présenté à la Commission le 22 août 2018. Les LNC gèrent des déchets radioactifs de faible et de moyenne activité aux trois sites, ainsi que du combustible nucléaire utilisé dans des silos de stockage à sec en béton sur les sites de DP et de G-1.

Après leur fermeture, les sites des réacteurs DP, G-1 et NPD ont chacun reçu un permis d'exploitation d'une installation de gestion des déchets distinct pour une période indéfinie. En juin 2014, la Commission a approuvé la demande d'EACL visant à fusionner les permis en un seul, WFDL-W4-332.00/2034, ainsi que la date d'expiration du 31 décembre 2034 [2]. Les permis ont été fusionnés parce qu'à ce moment-là, EACL n'avait aucun plan à court terme pour procéder aux travaux de déclasserment de la phase 3 sur l'un ou l'autre de ces sites. En octobre 2014, le nouveau permis a été transféré d'EACL aux LNC [3]. Ce transfert faisait partie de la transition des activités d'EACL vers un modèle d'organisme gouvernemental exploité par un entrepreneur (OGEE).

La condition 2.1 du permis WFDL-W4-332.01/2034 indique qu'il est interdit d'entamer les activités de démantèlement associées au déclasserment, à moins que la Commission ou une personne autorisée par la Commission n'ait acceptée un plan de déclasserment détaillé de la part des LNC qui explique les travaux à effectuer [4].

Depuis la transition au modèle d'OGEE, les LNC ont élaboré des stratégies de déclasserment distinctes pour chacun des sites des réacteurs DP, G-1 et NPD. Cette situation est illustrée par l'approche de déclasserment accéléré proposée par les LNC pour le site du réacteur NPD qui, si elle est autorisée par la Commission, verrait les travaux de déclasserment sur ce site se terminer des décennies plus tôt qu'originellement prévu. Ces différents échéanciers de déclasserment rendent difficile l'administration d'un seul permis couvrant les trois sites.

Le 18 juillet 2018, les LNC ont présenté à la CCSN une demande visant à séparer le permis WFDL-W4-332.01/2034 en trois permis distincts pour chacune des installations [5]. Dans leur demande, les LNC ont énoncé ce qui suit :

« ... Le déclassement de ces trois installations différera et sera effectué selon différents échéanciers, chacun nécessitant des modifications de permis qui intéresseront principalement les communautés qui seront directement touchées. Par conséquent, afin d'accorder l'attention nécessaire aux demandes de chaque installation, la présente lettre a pour but de fournir les renseignements requis pour présenter une demande de modification de permis [1] dans le but de le diviser et de délivrer trois permis distincts pour les installations de gestion des déchets des réacteurs DP, G-1 et NPD. On ne demande aucune modification aux activités du permis ni à la date d'expiration du permis (c.-à-d. le 31 décembre 2034). »

1.2 Information ou préoccupations particulières

Le personnel de la CCSN conclut que la demande des LNC visant à séparer le permis WFDL-W4-332.01/2034 ne constitue pas une modification de fond au fondement d'autorisation, car les LNC ne proposent aucune modification aux autorisations fournies dans le permis actuel ni à la date d'expiration. Le personnel de la CCSN conclut également que la séparation du permis pour les réacteurs DP, G-1 et NPD permettra d'accroître la transparence pour le public en favorisant des discussions qui seront davantage ciblées sur les plans individuels des LNC pour chaque site. Ces discussions ciblées gagneront en importance à mesure que les LNC iront de l'avant avec leurs plans de déclassement accéléré pour ces sites. Enfin, la séparation du permis permettra au personnel de la CCSN de mieux planifier et de mieux suivre les travaux d'autorisation et de vérification de la conformité pour ces trois sites. Pour ces raisons, le personnel de la CCSN appuie la demande des LNC.

Le personnel de la CCSN a rédigé de nouveaux permis proposés pour les sites des réacteurs DP, G-1 et NPD, ci-joints au présent CMD. Ces nouveaux permis sont identiques au permis actuel couvrant les trois sites, à l'exception de modifications mineures comme le numéro de permis, la suppression de toute référence aux deux autres sites, ainsi que la mise à jour des dates et des adresses. Une description détaillée des modifications apportées aux permis se trouve à la Deuxième partie du présent CMD.

Le personnel de la CCSN a assigné des numéros de permis proposés à ces trois permis. Afin d'offrir une continuité relativement à l'historique des activités effectuées sur ces sites, les numéros proposés s'alignent sur ceux utilisés avant la fusion des trois permis en 2014. La progression des numéros de permis pour les sites des réacteurs DP, G-1 et NPD est indiquée au Tableau 1.

Tableau 1 : Progression des numéros de permis proposés pour Douglas Point, Gentilly-1 et le réacteur nucléaire de démonstration

Site	Numéro de permis			
	Avant juillet 2014	De juillet 2014 à octobre 2014	D'octobre 2014 à ce jour	Proposition
Douglas Point	AECB-WFOL-332-4.3	WFDL-W4-332.00/2034	WFDL-W4-332.01/2034	WFDL-W4-332.02/2034
Gentilly-1	AECB-WFOL-331-4.3			WFDL-W4-331.00/2034
Réacteur nucléaire de démonstration	AECB-WFOL-342-2.6			WFDL-W4-342.00/2034

Le 31 mars 2016, les LNC ont soumis au personnel de la CCSN une description de projet [6] qui expliquait les plans de déclassement pour le site du réacteur NPD selon un calendrier accéléré et avec le déclassement *in situ* du réacteur. Ce projet débord de la portée du présent CMD, et il est important de noter que l'approche de déclassement accéléré proposée par les LNC pour le réacteur NPD ne sera pas approuvée avec la délivrance de l'ébauche du permis visant le réacteur NPD qui est joint au présent CMD. Des décisions de la Commission seraient requises pour autoriser des modifications aux échéanciers de déclassement et aux états finaux actuellement approuvés pour les réacteurs DP, G-1 et NPD.

1.3 Conclusions générales

Le personnel de la Commission canadienne de sûreté nucléaire (CCSN) est parvenu aux conclusions suivantes en ce qui a trait aux alinéas 24(4)a) et b) de la *Loi sur la sûreté et la réglementation nucléaires*, c'est-à-dire que le titulaire du permis :

1. est compétent pour exercer les activités visées par le permis;
2. prendra, dans le cadre de ces activités, les mesures voulues pour préserver la santé et la sécurité des personnes, pour protéger l'environnement, pour maintenir la sécurité nationale et pour respecter les obligations internationales que le Canada a assumées.

1.4 Recommandations générales

Dans l'ensemble, le personnel de la CCSN recommande ce qui suit :

1. Que la Commission modifie le permis WFDL-W4-332.01/2034 afin qu'il s'applique uniquement à l'installation de gestion des déchets de Douglas Point, sans modification aux autorisations pour ce site ni à la date d'expiration, et

2. Que la Commission délivre un nouveau permis pour chacune des installations de gestion des déchets de Gentilly-1 et du réacteur nucléaire de démonstration, avec une date d'expiration demeurant valide jusqu'au 31 décembre 2034 ainsi qu'avec les autorisations pour ces sites identiques à celles actuellement indiquées dans le permis WFDL-W4-332.01/2034.

2. FACTEURS À PRENDRE EN CONSIDÉRATION

2.1 Évaluation environnementale

Le personnel de la CCSN a examiné la demande des LNC visant à séparer le permis actuel pour les réacteurs DP, G-1 et NPD en vertu du LSRN et a conclu qu'il n'y aura aucun impact sur l'environnement, puisque cette demande des LNC n'entraîne aucune modification de fond. Une évaluation environnementale n'est donc pas requise.

2.2 Domaines de sûreté et de réglementation (DSR) pertinents

Les domaines fonctionnels de toute installation autorisée comprennent un ensemble standard de domaines de sûreté et de réglementation (DSR). Comme la demande des LNC n'entraîne aucune modification aux activités autorisées, l'évaluation des DSR n'est pas incluse dans ce CMD.

Le personnel de la CCSN vérifie la conformité des LNC aux exigences réglementaires sur les sites des réacteurs DP, G-1 et NPD en réalisant des inspections et en examinant la documentation pertinente des LNC. Le personnel de la CCSN confirme que toutes les mesures d'application soulevées jusqu'à présent pendant la période d'autorisation actuelle ont été réglées.

Des comptes rendus sur les travaux des LNC à ces sites ainsi que sur la surveillance de ces travaux effectuée par la CCSN ont été présentés dans le cadre de rapports d'étape à la Commission. Les plus récents comptes rendus ont inclus le CMD 18-M30 [1] présenté à la Commission le 22 août 2018 ainsi que le CMD 16-M12 [7] présenté à la Commission le 6 avril 2016.

Les renseignements concernant le rendement des LNC sur ces sites continueront d'être présentés dans les comptes rendus du personnel de la CCSN à la Commission sur les activités de réglementation aux sites des LNC, dans le cadre de réunions publiques. Si les LNC souhaitent d'accélérer le déclassement de l'un ou l'autre des sites des réacteurs DP, G-1 ou NPD, une décision de la Commission sera nécessaire. La documentation du personnel de la CCSN pour appuyer une telle décision comprendra une évaluation complète de tous les DSR applicables à ces sites.

3. AUTRES QUESTIONS D'ORDRE RÉGLEMENTAIRE

Le tableau suivant indique les autres questions qui s'appliquent au présent CMD.

AUTRES QUESTIONS D'INTÉRÊT RÉGLEMENTAIRE	
Domaine	Applicable au présent CMD?
Consultation des Autochtones	Oui
Autres consultation de la CCSN	Non
Recouvrement des coûts	Oui
Garanties financières	Oui
Plans d'amélioration et prochaines activités futures	Oui
Programme d'information publique du titulaire du permis	Oui
Assurance en matière de responsabilité nucléaire	Non

Les autres questions présentant un intérêt d'ordre réglementaire sont traitées ci-dessous.

3.1 Consultation des Autochtones

La demande de permis des LNC ne comprend pas de modification de fond et ne propose aucune modification physique ou opérationnelle aux trois installations. Aucun impact n'est attendu sur les droits autochtones ou les droits issus de traités, potentiels ou établis, et donc il n'y a aucune obligation de consulter relativement à cette demande de permis. Dans le but d'établir et de maintenir des relations avec les peuples autochtones, le personnel de la CCSN continuera d'informer les communautés et les organisations autochtones potentiellement intéressées à l'égard de tout changement ou activités concernant les trois installations, le cas échéant.

3.2 Recouvrement des coûts

Une installation nucléaire de catégorie I doit respecter les exigences de la Partie 2 du *Règlement sur les droits pour le recouvrement des coûts* de la CCSN. Les droits sont habituellement facturés sur une base annuelle et sont acquittés par le titulaire de permis tous les trois mois.

Les LNC ont payé leurs droits de permis en entier pendant la période d'autorisation actuelle. Compte tenu de leur rendement précédent, il n'y a aucune préoccupation à l'égard du paiement des futurs droits de permis.

Conformément au *Règlement sur les droits pour le recouvrement des coûts de la Commission canadienne de sûreté nucléaire*, les droits de permis facturés aux LNC pour les sites des réacteurs DP, G-1 et NPD sont calculés par la Commission « ... à l'aide du coût entier estimatif du plan des activités de réglementation qu'elle établit relativement à l'installation ou à l'activité... du titulaire de permis » [8]. Le plan des activités de réglementation repose sur l'évaluation du risque faite par le personnel de la CCSN à l'égard d'une installation ou d'une activité donnée. Les risques que posent les sites des réacteurs DP, G-1 et NPD ne changeraient pas si les sites étaient autorisés séparément; par conséquent, il n'y aura aucun impact sur les droits pour le recouvrement des coûts facturés aux LNC si la Commission approuve la demande des LNC de séparer le permis.

3.3 Garanties financières

La condition 2.2 du permis WFDL-W4-332.01/2034 exige que les LNC maintiennent en vigueur une garantie financière pour le déclassé des sites des réacteurs DP, G-1 et NPD.

Même si ces sites sont gérés par les LNC, EACL en conserve la propriété et est également responsable de tous leurs actifs et leurs passifs. En ce qui concerne la garantie financière mentionnée à l'alinéa 3(1)l) du *Règlement général sur la sûreté et la réglementation nucléaires*, EACL est une société d'État en vertu de la Partie I de l'Annexe III de la *Loi sur la gestion des finances publiques*, et est mandataire de Sa Majesté du Chef du Canada. Par conséquent, les responsabilités d'EACL sont en définitive celles de Sa Majesté du Chef du Canada. Ces responsabilités ont été officiellement reconnues par le ministre fédéral des Ressources naturelles plus récemment dans une lettre datée du 31 juillet 2015 [9]. Si la Commission décide de séparer le permis WFDL-W4-332.01/2034, le personnel de la CCSN recommande d'accepter cet engagement à titre de garantie financière couvrant les sites des réacteurs DP, G-1 et NPD.

3.4 Plans d'amélioration et prochaines activités importantes

Les LNC ont l'intention de déclasser le site du réacteur NPD plus rapidement que ce qui est indiqué dans le plan de déclassé approuvé par la CCSN. Ce sujet débordé de la portée du présent CMD et l'information ci-dessous est présentée aux fins d'exhaustivité seulement.

Le 31 mars 2016, les LNC ont soumis à la CCSN une description de projet qui explique l'intention des LNC de modifier l'approche de déclassé approuvée par la CCSN pour le réacteur NPD, passant d'un démantèlement complet à un déclassé *in situ* [6]. Le déclassé *in situ* est une approche selon laquelle les matières radioactives restantes sont encapsulées de manière permanente sur place, créant ainsi un dépôt de déchets. Comme les plans de déclassé *in situ* des LNC ne font pas partie du fondement d'autorisation approuvé par la Commission pour le site du réacteur NPD, une modification de permis sera requise afin d'autoriser ces plans. Les LNC ont présenté une demande visant à modifier le permis WFDL W4-332.01/2034 afin de permettre le déclassé *in situ* du réacteur NPD [10], et ont soumis divers autres documents d'information à

l'appui de cette demande. Selon la nouvelle proposition des LNC, le déclassement du site du réacteur NPD se terminait en 2021 plutôt qu'en 2043, date prévue dans la proposition originale.

3.4.1 Discussion

Le personnel de la CCSN a déterminé que, conformément à la *Loi canadienne sur l'évaluation environnementale (2012)* (LCEE 2012) et à la *Loi sur la sûreté et la réglementation nucléaires* (LSRN) ainsi qu'à leurs règlements d'application, une évaluation environnementale effectuée en vertu de la LCEE 2012 ainsi qu'une modification au permis actuel sont requises pour permettre aux LNC de procéder avec leurs plans de déclassement *in situ* pour le réacteur NPD. L'évaluation environnementale et la demande de modification de permis feront l'objet de décisions prises par la Commission à une date future dans le cadre d'un processus d'audience publique. D'autres détails concernant les plans des LNC pour le déclassement *in situ* du réacteur NPD sont inclus dans le CMD 18-M30 [1] et le CMD 18-M30.A [11].

Une évaluation environnementale en vertu de la LCEE 2012 a débuté le 5 mai 2016. Dans le cadre du processus d'examen de l'évaluation environnementale, il y a eu deux possibilités d'examen par le public : la première pour la description de projet et l'autre plus récemment pour l'examen de l'ébauche de l'Étude d'impact environnemental (EIE). Les LNC ont reçu de nombreux commentaires substantifs de la part du personnel de la CCSN, des autorités fédérales et provinciales, des groupes autochtones et des membres du public et ont déterminé qu'ils avaient besoin de plus de temps que ce qui était prévu au départ afin de fournir des réponses adéquates. En juin 2018, les LNC ont informé la Commission que l'EIE final ainsi que l'audience publique connexe, prévus pour juin et décembre 2018 respectivement, seront reportés jusqu'à nouvel ordre, et aucune autre date n'a été proposée [12].

3.4.2 Conclusion

La demande actuelle visant à séparer le permis des réacteurs DP, G-1 et NPD n'a aucun lien avec la stratégie de déclassement accéléré proposée par les LNC pour le réacteur NPD. Les nouveaux permis proposés pour les sites des réacteurs DP, G-1 et NPD, joints au présent CMD, ne modifieront pas le fondement d'autorisation actuellement approuvé. Conformément au Compte rendu de délibérations [2] sur la fusion des permis en 2014, le permis WFDL-W4-332.01/2034 « ... autorise uniquement les activités de stockage sous surveillance ». Si les LNC choisissent de procéder avec le déclassement accéléré de l'un ou l'autre des sites des réacteurs DP, G-1 et NPD, leurs plans seront assujettis à une décision de la Commission qui sera prise à une date ultérieure.

3.5 Programme d'information publique du titulaire de permis

L'objectif principal du programme d'information publique d'un titulaire de permis consiste à s'assurer que l'information liée à la santé, à la sûreté et à la sécurité des personnes, à l'environnement et à d'autres sujets associés au cycle de vie des installations nucléaires est efficacement communiquée au public. Le programme d'information publique inclut un protocole de divulgation publique qui décrit l'information à divulguer et le moyen de divulgation de l'information et des rapports d'intérêt public.

Pour s'assurer que les titulaires de permis fournissent au public des renseignements ouverts et transparents, la CCSN a publié en 2012 le document RD/GD-9.3, *L'information et la divulgation publiques*. Le programme d'information publique des LNC pour les réacteurs DP, G-1 et NPD a été élaboré en conformité avec le guide RD/GD 99.3 de la CCSN et permet aux membres du public d'obtenir de l'information sur tous les aspects de ces projets, par exemple via le site Web des LNC sur les projets de déclassement, et assure une divulgation appropriée à la suite des événements imprévus.

Chaque permis proposé pour les réacteurs DP, G-1 et NPD comprend une exigence obligeant le titulaire de permis à avoir un programme d'information publique. En mai 2018, la CCSN a publié le REGDOC-3.2.1, *L'information et la divulgation publiques*. Un plan de transition sera élaboré afin d'incorporer les exigences de cette version actualisée dans les documents du fondement d'autorisation pour les projets des LNC, y compris pour les réacteurs DP, G-1 et NPD.

3.6 Délégation des pouvoirs

La Commission peut assortir le permis de toute condition qu'elle juge nécessaire aux fins de la LSRN. La Commission peut déléguer des pouvoirs au personnel de la CCSN en ce qui a trait à l'administration des conditions du permis ou de parties de celui-ci.

Le personnel de la CCSN recommande que la Commission apporte une modification aux pouvoirs actuellement délégués qui sont indiqués à la section A.4 du Manuel des conditions de permis (MCP) associé au permis en vigueur (WFDL-W4-332.01/2034). Le personnel de la CCSN recommande que le pouvoir soit délégué au directeur de la Division du programme de réglementation des Laboratoires Nucléaires Canadiens plutôt qu'à l'agent de projet qui supervise les activités de délivrance de permis et de conformité. Cette modification serait codifiée dans les MCP mis à jour et associés aux trois permis.

Si la modification est approuvée, la Commission délèguerait ses pouvoirs aux postes suivants :

- le premier vice-président, Direction générale de la réglementation des opérations
- la directrice général, Direction de la réglementation du cycle et des installations nucléaires
- la directrice, Division du programme de réglementation des LNC

4. CONCLUSIONS ET RECOMMANDATIONS GÉNÉRALES

Le personnel de la Commission canadienne de sûreté nucléaire (CCSN) est parvenu aux conclusions suivantes en ce qui a trait aux alinéas 24(4)a) et b) de la *Loi sur la sûreté et la réglementation nucléaires*, c'est-à-dire que le titulaire du permis :

1. est compétent pour exercer les activités visées par le permis;
2. prendra, dans le cadre de ces activités, les mesures voulues pour préserver la santé et la sécurité des personnes, pour protéger l'environnement, pour maintenir la sécurité nationale et pour respecter les obligations internationales que le Canada a assumées.

Étant donné le contenu de la demande des LNC et du présent CMD, le personnel de la CCSN recommande ce qui suit :

1. Que la Commission modifie le permis WFDL-W4-332.01/2034 afin qu'il s'applique uniquement à l'installation de gestion des déchets de Douglas Point, sans modification aux autorisations pour ce site ni à la date d'expiration, et
2. Que la Commission délivre un nouveau permis pour chacune des installations de gestion des déchets de Gentilly-1 et du réacteur nucléaire de démonstration, avec une date d'expiration demeurant valide jusqu'au 31 décembre 2034 ainsi qu'avec les autorisations pour ces sites identiques à celles actuellement indiquées dans le permis WFDL-W4-332.01/2034.

RÉFÉRENCES

1. CMD 18-M30, note d'information technique, Rapport d'étape du personnel de la CCSN sur les installations prototypes de gestion des déchets, les laboratoires de Whiteshell et l'Initiative dans la région de Port Hope, 22 juin 2018 (e-Doc 5554206).
2. Compte rendu des délibérations, Énergie atomique du Canada limitée - *Demande de remplacement des permis d'installations prototypes de gestion des déchets d'EACL*, 16 juillet 2014 (e-Doc 4471304).
Compte rendu des délibérations, Énergie atomique du Canada limitée - Demande de cinq transferts de permis et demande de deux exemptions particulières pour les Laboratoires Nucléaires Canadiens Limitée, 22 octobre 2014 (e-Doc 4543516).
3. Permis de déclassement d'une installation de déchets, installations prototypes de gestion des déchets, WFDL-W4-332.01/2034, 16 juillet 2014 (e-Doc 4541221) – condition de permis 2.1.
4. Lettre de K. Kehler à H. Tadros, « Demande visant à séparer le permis de déclassement d'une installation de gestion des déchets, WFDL-W4-332.01/2034, en trois permis distincts pour les installations de gestion des déchets de Douglas Point, de Gentilly-1 et du réacteur nucléaire de démonstration », 11 juillet 2018 (e-Doc 5618549).
5. Lettre de K. Kehler à D. Newland, « Document réglementaire pour le projet de fermeture du réacteur NPD », 31 mars 2018 (e-Doc 4977247).
6. CMD 16-M12, Rapport d'étape, Rapport d'étape sur les installations prototypes de gestion des déchets des LNC et les Laboratoires nucléaires de Whiteshell, 22 mars 2016 (e-Doc 4908461).
7. Règlement sur les droits pour le recouvrement des coûts de la Commission canadienne de sûreté nucléaire, DORS/2003-212, alinéa 4a).
8. Lettre de l'honorable G. Rickford à M. Binder, 31 juillet 2015 (e-Doc 4815508).
9. Lettre de K. Kehler de M. Leblanc, « Demande de modification de permis pour procéder au déclassement de l'installation de gestion des déchets du réacteur nucléaire de démonstration », 29 septembre 2017 (e-Doc 5349496).
10. CMD 18-M30.A, Exposé du personnel de la CCSN à la Commission, *Rapport d'étape sur les installations prototypes de gestion des déchets, les laboratoires de Whiteshell et l'IRPH*, 22 août 2018 (e-Doc 5540387).
11. Lettre de K. Kehler à M. Leblanc, « Mise à jour de la demande de modification de permis pour procéder au déclassement de l'installation de gestion des déchets du réacteur nucléaire de démonstration », 5 juin 2018 (e-Doc 5568956).

DEUXIÈME PARTIE

La Deuxième partie présente tous les renseignements pertinents qui portent directement sur le permis, notamment :

1. les modifications proposées aux conditions, à la période d'autorisation ou au format du permis existant
2. les permis proposés
3. les MCP proposés (cités en référence dans les permis proposés)
4. le permis actuel
5. le MCP actuel

MODIFICATIONS DE PERMIS PROPOSÉES

Vue d'ensemble

Les changements entre le permis WFDL-W4-332.01/2034 et les trois permis proposés sont mineurs et ne constituent pas des modifications de fond. Le personnel de la CCSN a assigné des numéros de permis proposés à ces trois permis. Afin d'offrir une continuité relativement à l'historique des activités effectuées sur ces sites, les numéros proposés s'alignent sur ceux utilisés avant la fusion des trois permis en 2014. La progression des numéros de permis pour les sites des réacteurs DP, G-1 et NPD est indiquée au Tableau 1.

Tableau 1 : Progression des numéros de permis proposés pour Douglas Point, Gentilly-1 et le réacteur nucléaire de démonstration

Site	Numéro de permis			
	<i>Avant juillet 2014</i>	<i>De juillet 2014 à octobre 2014</i>	<i>D'octobre 2014 à ce jour</i>	<i>Proposition</i>
Douglas Point	AECB-WFOL-332-4.3	WFDL-W4-332.00/2034	WFDL-W4-332.01/2034	WFDL-W4-332.02/2034
Gentilly-1	AECB-WFOL-331-4.3			WFDL-W4-331.00/2034
Réacteur nucléaire de démonstration	AECB-WFOL-342-2.6			WFDL-W4-342.00/2034

Modifications apportées

Voici les modifications entre le permis actuel et l'ébauche des permis proposés :

- Mettre à jour le titre de chaque permis afin de mentionner uniquement l'installation couverte et supprimer toute autre référence aux deux autres installations dans l'ensemble du document.
- Dans le cas du permis de Douglas Point, augmenter de un le numéro de révision du permis.
- Dans le cas des permis pour Gentilly-1 et le réacteur nucléaire de démonstration, attribuer des numéros de permis sur la base des numéros de permis individuels précédents utilisés pour ces sites.
- Mettre à jour l'adresse des LNC.
- Citer en référence la version actuelle du MCP pour chaque site.

Format du permis

Aucune modification n'est proposée au format du permis.

Période d'autorisation

Aucune modification n'est proposée à la période d'autorisation – le permis actuel et les trois permis proposés expirent tous le 31 décembre 2034.

Délégation des pouvoirs

Aucune modification n'est proposée au texte du permis.

PERMIS PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DE DOUGLAS POINT

Le permis proposé de l'installation de gestion des déchets de Douglas Point est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5631490 (Word)

e-Doc 5730798 (PDF)



WASTE FACILITY DECOMMISSIONING LICENCE

DOUGLAS POINT WASTE FACILITY

- I) **LICENCE NUMBER:** WFDL-W4-332.02/2034
- II) **LICENSEE:** Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to:
- Canadian Nuclear Laboratories Limited**
Laboratoires nucléaires canadiens limitée
286 Plant Road
Chalk River, Ontario
K0J 1J0
- III) **LICENCE PERIOD:** This licence is valid from the date signed and remains in effect until **December 31, 2034**, unless otherwise suspended, amended, revoked, or replaced.
- IV) **LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- a) decommission the Douglas Point Waste Facility, as further described and located on the sites defined in the Licence Conditions Handbook associated with WFDL-W4-332.02/2034.
 - b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
 - c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b)
- V) **EXPLANATORY NOTES:**
- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.

- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.
- (iii) The WFDL-W4-332.02/2034 Licence Conditions Handbook (LCH) identifies the criteria that will be used by Canadian Nuclear Safety Commission (CNSC) staff to assess the licensee's compliance with the conditions listed in the licence. The LCH also provides information regarding delegation of authority and applicable version control of documents.

VI) CONDITIONS:

1 GENERAL

- 1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.
- 1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.
- 1.3 The licensee shall implement and maintain decommissioning policies, programs and procedures.
- 1.4 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.
- 1.5 The licensee shall ensure that every contractor working at the facility complies with this licence.
- 1.6 The licensee shall comply with all commitments defined in the WFDL-W4-332.02/2034 LCH.
- 1.7 The licensee shall implement and maintain a public information program and disclosure program.

2 DECOMMISSIONING

- 2.1 The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.
- 2.2 The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

3 MANAGEMENT SYSTEM

- 3.1 The licensee shall implement and maintain a management system.

4 HUMAN PERFORMANCE MANAGEMENT

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

5 OPERATING PERFORMANCE

- 5.1 The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

6 SAFETY ANALYSIS

- 6.1 The licensee shall maintain a safety report for the facility.

7 PHYSICAL DESIGN

- 7.1 The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

8 FITNESS FOR SERVICE

- 8.1 The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

9 RADIATION PROTECTION

- 9.1 The licensee shall implement and maintain a radiation protection program.
- 9.2 The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

10 CONVENTIONAL HEALTH AND SAFETY

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

11 ENVIRONMENTAL PROTECTION

- 11.1 The licensee shall implement and maintain an environmental protection program.

12 EMERGENCY MANAGEMENT AND FIRE PROTECTION

- 12.1 The licensee shall implement and maintain an emergency preparedness and response program.
- 12.2 The licensee shall implement and maintain a fire protection program.

13 WASTE MANAGEMENT

- 13.1 The licensee shall implement and maintain a waste management program.
- 13.2 The licensee shall maintain a preliminary decommissioning plan and cost estimate.

14 SECURITY

- 14.1 The licensee shall implement and maintain a security program.
- 14.2 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

15 SAFEGUARDS AND NON-PROLIFERATION

- 15.1 The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

16 PACKAGING AND TRANSPORT

- 16.1 The licensee shall implement and maintain a packaging and transportation program.

SIGNED at OTTAWA, this ____ day of _____, 2018

Rumina Velshi, President
On behalf of the Canadian Nuclear Safety Commission

PERMIS PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DE GENTILLY-1

Le permis proposé de l'installation de gestion des déchets de Gentilly-1 est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5631491 (Word)

e-Doc 5730795 (PDF)



WASTE FACILITY DECOMMISSIONING LICENCE

GENTILLY-1 WASTE FACILITY

- I) **LICENCE NUMBER:** WFDL-W4-331.00/2034
- II) **LICENSEE:** Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to:
- Canadian Nuclear Laboratories Limited**
Laboratoires nucléaires canadiens limitée
286 Plant Road
Chalk River, Ontario
K0J 1J0
- III) **LICENCE PERIOD:** This licence is valid from the date signed and remains in effect until **December 31, 2034**, unless otherwise suspended, amended, revoked, or replaced.
- IV) **LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- a) decommission the Gentilly-1 Waste Facility, as further described and located on the sites defined in the Licence Conditions Handbook associated with WFDL-W4-331.00/2034.
 - b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
 - c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b)
- V) **EXPLANATORY NOTES:**
- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.

- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.
- (iii) The WFDL-W4-331.00/2034 Licence Conditions Handbook (LCH) identifies the criteria that will be used by Canadian Nuclear Safety Commission (CNSC) staff to assess the licensee's compliance with the conditions listed in the licence. The LCH also provides information regarding delegation of authority and applicable version control of documents.

VI) CONDITIONS:

1 GENERAL

- 1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.
- 1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.
- 1.3 The licensee shall implement and maintain decommissioning policies, programs and procedures.
- 1.4 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.
- 1.5 The licensee shall ensure that every contractor working at the facility complies with this licence.
- 1.6 The licensee shall comply with all commitments defined in the WFDL-W4-331.00/2034 LCH.
- 1.7 The licensee shall implement and maintain a public information program and disclosure program.

2 DECOMMISSIONING

- 2.1 The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.
- 2.2 The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

3 MANAGEMENT SYSTEM

- 3.1 The licensee shall implement and maintain a management system.

4 HUMAN PERFORMANCE MANAGEMENT

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

5 OPERATING PERFORMANCE

- 5.1 The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

6 SAFETY ANALYSIS

- 6.1 The licensee shall maintain a safety report for the facility.

7 PHYSICAL DESIGN

- 7.1 The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

8 FITNESS FOR SERVICE

- 8.1 The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

9 RADIATION PROTECTION

- 9.1 The licensee shall implement and maintain a radiation protection program.
- 9.2 The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

10 CONVENTIONAL HEALTH AND SAFETY

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

11 ENVIRONMENTAL PROTECTION

- 11.1 The licensee shall implement and maintain an environmental protection program.

12 EMERGENCY MANAGEMENT AND FIRE PROTECTION

- 12.1 The licensee shall implement and maintain an emergency preparedness and response program.
- 12.2 The licensee shall implement and maintain a fire protection program.

13 WASTE MANAGEMENT

- 13.1 The licensee shall implement and maintain a waste management program.
- 13.2 The licensee shall maintain a preliminary decommissioning plan and cost estimate.

14 SECURITY

- 14.1 The licensee shall implement and maintain a security program.
- 14.2 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

15 SAFEGUARDS AND NON-PROLIFERATION

- 15.1 The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

16 PACKAGING AND TRANSPORT

- 16.1 The licensee shall implement and maintain a packaging and transportation program.

SIGNED at OTTAWA, this ____ day of _____, 2018

Rumina Velshi, President
On behalf of the Canadian Nuclear Safety Commission

PERMIS PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DU RÉACTEUR NUCLÉAIRE DE DÉMONSTRATION

Le permis proposé de l'installation de gestion des déchets du réacteur nucléaire de démonstration est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5631487 (Word)

e-Doc 5730800 (PDF)



WASTE FACILITY DECOMMISSIONING LICENCE

NUCLEAR POWER DEMONSTRATION

- I) **LICENCE NUMBER:** WFDL-W4-342.00/2034
- II) **LICENSEE:** Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to:
- Canadian Nuclear Laboratories Limited**
Laboratoires nucléaires canadiens limitée
286 Plant Road
Chalk River, Ontario
K0J 1J0
- III) **LICENCE PERIOD:** This licence is valid from the date signed and remains in effect until **December 31, 2034**, unless otherwise suspended, amended, revoked, or replaced.
- IV) **LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- decommission the Nuclear Power Demonstration Waste Facility, as further described and located on the sites defined in the Licence Conditions Handbook associated with WFDL-W4-342.00/2034.
 - possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
 - possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b)

V) EXPLANATORY NOTES:

- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.
- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.
- (iii) The WF DL-W4-342.00/2034 Licence Conditions Handbook (LCH) identifies the criteria that will be used by Canadian Nuclear Safety Commission (CNSC) staff to assess the licensee's compliance with the conditions listed in the licence. The LCH also provides information regarding delegation of authority and applicable version control of documents.

VI) CONDITIONS:

1 GENERAL

- 1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.
- 1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.
- 1.3 The licensee shall implement and maintain decommissioning policies, programs and procedures.
- 1.4 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.
- 1.5 The licensee shall ensure that every contractor working at the facility complies with this licence.
- 1.6 The licensee shall comply with all commitments defined in the WF DL-W4-342.00/2034 LCH.
- 1.7 The licensee shall implement and maintain a public information program and disclosure program.

2 DECOMMISSIONING

- 2.1 The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.
- 2.2 The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

3 MANAGEMENT SYSTEM

- 3.1 The licensee shall implement and maintain a management system.

4 HUMAN PERFORMANCE MANAGEMENT

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

5 OPERATING PERFORMANCE

- 5.1 The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

6 SAFETY ANALYSIS

- 6.1 The licensee shall maintain a safety report for the facility.

7 PHYSICAL DESIGN

- 7.1 The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

8 FITNESS FOR SERVICE

- 8.1 The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

9 RADIATION PROTECTION

- 9.1 The licensee shall implement and maintain a radiation protection program.
- 9.2 The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

10 CONVENTIONAL HEALTH AND SAFETY

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

11 ENVIRONMENTAL PROTECTION

- 11.1 The licensee shall implement and maintain an environmental protection program.

12 EMERGENCY MANAGEMENT AND FIRE PROTECTION

- 12.1 The licensee shall implement and maintain an emergency preparedness and response program.
- 12.2 The licensee shall implement and maintain a fire protection program.

13 WASTE MANAGEMENT

- 13.1 The licensee shall implement and maintain a waste management program.
- 13.2 The licensee shall maintain a preliminary decommissioning plan and cost estimate.

14 SECURITY

- 14.1 The licensee shall implement and maintain a security program.
- 14.2 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

15 SAFEGUARDS AND NON-PROLIFERATION

- 15.1 The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

16 PACKAGING AND TRANSPORT

- 16.1 The licensee shall implement and maintain a packaging and transportation program.

SIGNED at OTTAWA, this ____ day of _____, 2018

Rumina Velshi, President
On behalf of the Canadian Nuclear Safety Commission

MCP PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DE DOUGLAS POINT

Le Manuel des conditions de permis proposé pour l'installation de gestion des déchets de Douglas Point est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5698687 (Word)

e-Doc 5734992 (PDF)



PDF Ref: e-Doc 5734992

Word Ref: e-Doc 5698687

File No.: 2.14

LICENCE CONDITIONS HANDBOOK

WFDL-LCH-W4-332.02/2034

PROTOTYPE WASTE FACILITIES – WASTE FACILITY DECOMMISSIONING LICENCE

DOUGLAS POINT WASTE FACILITY

WFDL-W4-332.02/2034

Revision 0

DRAFT



DRAFT

Licence Conditions Handbook
(WFDL-LCH-W4-332.02/2034,
Revision 0)

Effective: DATE, YEAR

Prototype Waste Facilities – Waste Facility
Decommissioning Licence
Douglas Point Waste Facility
WFDL-W4-332.02/2034 (Effective: DATE, YEAR)

SIGNED at OTTAWA this Xth day of MONTH, YEAR

Kavita Murthy, Director

Canadian Nuclear Laboratories Regulatory Program Division
Directorate of Nuclear Cycle and Facilities Regulations
CANADIAN NUCLEAR SAFETY COMMISSION

REVISION HISTORY:

Effective Date	Rev. #	e-Doc #	Description	CAF e-Doc #
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DRAFT

Revision History

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INTRODUCTION

The general purpose of the Licence Conditions Handbook (LCH) is to identify and clarify the relevant parts of the licensing basis for each licence condition. This will help ensure that the licensee performs the licensed activities for the facility in accordance with the licensing basis and intent of the licence. The LCH should be read in conjunction with the licence.

The LCH typically has three parts under each licence condition: the Preamble, Compliance Verification Criteria (CVC), and Guidance. The Preamble explains, as needed, the regulatory context, background, and/or history related to the licence condition. CVC are criteria used by CNSC staff to verify and oversee compliance with the licence condition. Guidance is non-mandatory information, including direction on how to comply with the licence condition.

Current versions of the licensing basis publications, licensee documents that require notification of change, and guidance documents referenced in the LCH are tracked in the document *Licensing Documents for Prototype Waste Facilities*, which is controlled by the Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD) and is available to the licensee upon request.

Appendix A of this LCH provides definitions of terms and a list of acronyms used throughout the LCH.

Where delegation of the Commission's authority to CNSC staff has been granted by the Commission, "a person authorized by the Commission" means CNSC staff as long as the consent is within the authority that can be delegated under the Act and within the licensing basis. For this facility, the following CNSC staff have been granted this authority:

- Director, Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD)
- Director General, Directorate of Nuclear Cycle and Facilities Regulation (DG DNCFR),
- Executive Vice-President, Regulatory Operations Branch (EVP ROB).

More information on the LCH is available in the CNSC document titled *How to Write a Licence Conditions Handbook* (LCH) (e-Doc 4967591).

G. GENERAL

Licence Condition 1.1: Conduct of Activities

The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.

Preamble:

The licence is issued by the Commission pursuant to section 24 of the *Nuclear Safety and Control Act* (NSCA) while the licensing basis is defined by the CNSC in CNSC Regulatory Document REGDOC 3.5.3 Regulatory Fundamentals.

The Douglas Point Waste Facility (DPWF) is located at the Bruce Power Site, which is midway between Kincardine and Port Elgin, Ontario, on the eastern shore of Lake Huron. It comprises parts of Lots 15 and 16 in Lake Range, in the Township of Bruce in the County of Bruce. This area is primarily rural and there is no single major urban centre in this region. Access can only be obtained by entering the Bruce Power Site through Bruce Power Security Main Gatehouse. The location within the Bruce Power Site is shown in Figure 2-2 of the Safety Analysis Report for the Douglas Point Waste Facility; 22-03610-SAR-001.

Compliance Verification Criteria:

Part (i) of the Licensing Basis

Part (i) of the licensing basis refers to applicable laws and regulations. There are many federal and provincial acts and regulations, and international laws, agreements, guidelines, etc., applicable to activities performed at a licensed facility.

Part (ii) of the Licensing Basis

Part (ii) of the licensing basis refers to the conditions and the safety and control measures included in this licence and in the documents directly referenced in the licence.

The licence requires the licensee to implement and maintain certain programs. There are no documents directly referenced in the standardized licence, those documents are now referenced in the LCH.

For the purpose of licence requirement, a program may be a series of documented, coordinated activities, not necessarily a single document.

Part (iii) of the Licensing Basis

Part (iii) of the licensing basis refers to the safety and control measures described in the licence application and the documents needed to support that licence application. The safety and control measures include important aspects of that documentation such as, but not limited to:

- the facility-specific design basis and operational information documented in the most recent safety analysis and operational limits and conditions documents;
- the licensee's written commitments, including all modifications and additions to such commitments over the duration of the licence that were made in formal correspondence, and in effect for ensuring compliance with, and conduct of licensed activities within applicable CNSC requirements, including: licensee responses to CNSC enforcement actions; licensee responses to CNSC inspections; licensee responses to CNSC requests; and licensee event reports.

Part (iii) of the licensing basis also includes safety and control measures outlined in CNSC regulatory documents, CSA standards, and other standards, codes and references that are cited in the application or in the licensee's supporting documentation.

Applicable licensee documents are listed in the LCH under the heading "Licensee Documents that Require Notification of Change". Applicable CNSC regulatory documents, CSA standards and other documents are listed in the LCH under the heading "Licensing Basis Publications". The documents listed in the LCH could cite other documents that also contain safety and control measures (i.e., there may be safety and control measures in "nested" references in the application). The documents listed in the LCH and their "nested" references define the licensing basis for the programs required by this licence.

Regulatory Role of the Licensing Basis

The licensing basis is established when the Commission renders its decision regarding the licence application.

Licence condition 1.1 requires the licensee to conduct the licensed activities in accordance with the licensing basis. For activities that are not in accordance with the licensing basis, the licensee shall take action as soon as practicable to return to a state consistent with the licensing basis, taking into account the risk significance of the situation.

This licence condition is not intended to unduly inhibit the ongoing management and operation of the facility or the licensee's ability to adapt to changing circumstances and continuously improve. This licence condition does not explicitly prohibit changes (such as in management or operation) with a neutral or positive impact on safety. Changes shall be compliant with the licensing basis, shall be made according to the licensee's management system (licence condition 3.1) and shall be made in accordance with licence condition 1.4.

CNSC Staff's Approach to Assessing the Licensing Basis

For any proposed activity/facility to be carried out at the site, CNSC staff will review the information submitted by CNL to determine if the proposed activity/facility remains within the licensing basis. CNL may proceed with the proposed initiatives if they are found to be within the licensing basis.

CNSC staff assess a proposed facility/activity as being within the licensing basis based on changes or impact on the overall safety of the site.

CNSC staff will submit to the Commission for consideration any proposed activity or facility which CNSC staff consider to be outside the licensing basis. If the Commission grants approval to such an activity/facility, this activity/facility will become part of the licensing basis and reflected in updates to LCH as appropriate.

Activities Included in the Licensing Basis

Conduct of licensed activities at DP include:

- (a) decommission the DP WF, as further described and located on the sites defined in the WFDL-W4-332.02/2034 LICENCE CONDITIONS HANDBOOK (LCH);
- (b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
- (c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b).

As per the Record of Proceedings dated July 16, 2014 (e-Doc 4471304), the Waste Facility Decommissioning Licence solely authorizes continued storage-with-surveillance activities at the DP site. Prior to entering active decommissioning, CNL would be required to submit a detailed decommissioning plan.

Licence Application Documents and Supporting Documents

Document Number	Document Title	e-Doc
3640-ACNO-14-0004-L	Application to Replace Waste Facility Operating Licences for AECL Prototype Reactor Waste Management Facilities: Nuclear Power Demonstration (NPD), Douglas Point and Gentilly-1	4413446
145-ACNO-14-0021-L	AECL Transfer of Commission Licences to the Canadian Nuclear Laboratories Limited and Associated Applications for Exemption from Regulations	4483033

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-3.5.3	Regulatory Fundamentals	2018

When the licensee becomes aware that a proposed change or activity might be outside the licensing basis, it should first seek direction from CNSC staff regarding the potential acceptability of this change or activity. The licensee should take into account that certain types of proposed changes might require significant lead times before CNSC staff can make recommendations and/or the Commission can properly consider them.

Licence Condition 1.2: Inconsistencies

The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

Preamble:

None provided.

Compliance Verification Criteria:

In the event of any conflict or inconsistency between two elements of the licensing basis, the licensee shall direct the conflict or inconsistency to CNSC staff for resolution.

Guidance:

None provided.

Licence Condition 1.3: Decommissioning Policies and Programs

The licensee shall implement and maintain decommissioning policies, programs and procedures.

Preamble:

The *Class I Nuclear Facilities Regulations (C1NFR)* require that an application for a licence to decommission a Class I nuclear facility contain proposed measures, methods and procedures for carrying on the decommissioning.

This licence condition requires that the licensee implement and maintain adequate decommissioning policies, programs and procedures. These:

- define the operating rules consistent with the safety report and other licensing support documentation within which the facility will be maintained
- specify the authorities of facility staff to make decisions within the defined boundaries and,
- identify and differentiate between actions where discretion may be applied and where jurisdictional authorization is required.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009	July 25, 2014

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
22-00960-SWS-001	Douglas Point Waste Facility Storage with Surveillance Plan	4700734	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
22-00960-PDP-001	Douglas Point Waste Facility Preliminary Decommissioning Plan	4992922	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

Guidance:

None provided.

Licence Condition 1.4: Changes to Polices, Programs and Procedures

The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.

Preamble:

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity and thus establishes the basis for the CNSC's compliance program in respect of that regulated facility or activity. Licensees are required to conduct the licensed activities in accordance with the licensing basis; however, as changes to the facility, or to the documents included or referenced in the licence application are to be expected during the licensing period, licensees are expected to assess changes for impact on the licensing basis. Any changes to the licensing basis require evaluation to determine impact as related to the provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

In general, it is expected that changes for which the licensee shall notify the CNSC will be captured as changes to specific licensee documents. The LCH identifies licensee documents that require written notification of changes to the CNSC. They are selected from the set of documents supporting the application and which describe the licensee's safety and control measures (part (iii) of the licensing basis). In identifying the appropriate documents for each LC, CNSC staff select licensee documents that provide reasonable assurance that adequate safety and control measures are in place to satisfy the LC. See LC 1.1 for additional discussion on the licensing basis.

Compliance Verification Criteria:

The licensee shall notify CNSC staff of changes to licensee's documents identified in the LCH. The notification shall identify if the changes are administrative in nature, or affect the licensing basis. The written notification of change shall include a copy of the revised document.

Licensee documents listed in the LCH (under each specific licence condition) are subdivided into groups having different requirements for notification of change.

- ACC CNSC staff acceptance of changes is required before proceeding with change
- PN prior notification - the licensee shall submit the notice to the CNSC prior to implementing the change; typically, the requirement is to submit the proposed changes 30 days prior to planned implementation; however, the licensee shall allow sufficient time for the CNSC to review the change proportionate to its complexity and the importance of the safety and control measures being affected
- NT notification at time of making the change

Changes that may affect the licensing basis, including any change that is not captured as a change to a document listed in the LCH (e.g., construction of new facilities/buildings, or transitioning any facility/building from one phase of its life cycle to another), requires written notification to the CNSC to verify they are in accordance with the licensing basis.

For any change that is outside the licensing basis, the licensee shall obtain Commission approval before proceeding with the change.

Guidance:

None provided.

Licence Condition 1.5: Contractors

The licensee shall ensure that every contractor working at the facility complies with this licence.

Preamble:

The *General Nuclear Safety and Control Regulations* (GNSCR) defines the obligations of the licensee. As part of the licensee's operations, contractors may be employed for activities within the boundaries of the licensed facility. Through the implementation of 'construction islands', the contractor has authority within the area to manage its own activities. However, this does not relieve the licensee of its obligations under the NSCA and the licence that was issued.

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Compliance Verification Criteria:

The management of contractors will be evaluated against the following elements and principles:

- The risks to contractors and risks to the organization from the use of contractors are evaluated to identify, assess, and eliminate or control hazards;
- Contractors are adequately trained in up-to-date procedures and are qualified and competent (i.e., knowledge, skills, and abilities) to conduct work within the licensed facility;
- Work carried out by the contractor is approved by competent members of the licensee's staff and monitored by qualified personnel.

Guidance:

None provided.

Licence Condition 1.6: Licensee Commitments

The licensee shall comply with all licensee commitments as defined in the WFDL-W4-332.02/2034 LCH.

Preamble:

The commitments referred to in Licence Condition 1.6 are all met.

Compliance Verification Criteria:

None provided.

Guidance:

None provided.

Licence Condition 1.7: Public Information and Disclosure Program

The licensee shall implement and maintain a public information program and disclosure program.

Preamble:

The CINFR requires that an application for a licence shall contain the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed.

The primary goal of the public information program, as it relates to the licensed activities, is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. The public information program includes a public disclosure protocol describing the information and the medium of disclosure in regard to information and reports of interest to the public.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
RD/GD-99.3	Public Information and Disclosure	2012	July 25, 2014

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-513430-REPT-001	Public Information Program for Canadian Nuclear Laboratories (CNL)	5252468	NT

Guidance:

None provided.

DECOMMISSIONING

Licence Condition 2.1: Decommissioning Plans

The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.

Preamble:

The C1NFR requires that a licence application contain the proposed plan for decommissioning of the nuclear facility or of the site.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	2014
G-219	Decommissioning planning for licensed activities	2000	2014

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
CW-508300-OV-146	Decommissioning Process Overview	4257057	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

The licensing basis for the DP WF only authorizes CNL to conduct activities related to the “Storage-with-Surveillance” phase.

Release from Regulatory Control

The licensee shall only release the decommissioned property, or any part thereof, for reuse upon acceptance of the final end-state report by the CNSC.

Guidance:

None provided.

Licence Condition 2.2: Financial Guarantee

The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application include any proposed financial guarantee relating to the activity to be licensed.

The financial guarantee for decommission a nuclear facility consists of one or more financial guarantee instruments which are based on the decommissioning strategy described in the comprehensive preliminary decommissioning plan and the associated cost estimate.

Atomic Energy of Canada Limited (AECL) is a Schedule III, Part 1 Crown Corporation under the *Financial Administration Act* and an agent of Her Majesty in Right of Canada. As an agent of Her Majesty in Right of Canada, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada. While the restructuring of AECL has seen the ownership of Canadian Nuclear Laboratories Limited (CNL) transferred to a private-sector contractor, the Canadian National Energy Alliance (CNEA), AECL retains ownership of the lands, assets and liabilities associated with CNL's licences. These liabilities have been officially recognized by the Minister of Natural Resources in a letter dated July 31, 2015 (e-Doc 4815508).

Compliance Verification Criteria:

The financial guarantee for decommissioning shall be reviewed and revised by the licensee every 5 years, when requested by the CNSC, or following a revision to the cost estimate for decommissioning or changes to the decommissioning strategy which significantly impacts the financial guarantee. The next revision of the financial guarantee is due by July 31, 2020.

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
145-NRCANNO-15-0.001	Relating to Provision of Financial Guarantees for AECL Sites	4815508	N/A

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – MANAGEMENT SYSTEM

Licence Condition 3.1: Management System

The licensee shall implement and maintain a management system.

Preamble:

The C1NFR requires that an application for a licence shall contain the proposed management system for the activity to be licensed, including measures to foster a healthy safety culture.

Safe and reliable operation of nuclear facilities requires a commitment and adherence to a set of management system principles and, consistent with those principles, the implementation of planned and systematic processes that achieve expected results. The management system focuses on safety in all business activities.

The management system is in place to satisfy the requirements set out in the NSCA, regulations made pursuant to the NSCA, the licence and the measures necessary to ensure that safety is of paramount consideration in the implementation of the management system. The management system promotes and supports a healthy safety culture by integrating the characteristics of a healthy safety culture:

- Safety is a clearly recognized value;
- Accountability for safety is clear;
- Safety is integrated into all activities;
- A safety leadership process exists; and
- Safety culture is learning driven

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.1.2	Safety Culture		
CSA N286	Management system requirements for nuclear facilities	2012	

Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514100-MAN-001	Management System	5185520	ACC
900-514200-MAN-001	Quality Assurance	5185528	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
900-514300-LST-001	Site Licences, Certificates, Permits and Representatives	5185538	NT
900-513000-LST-001	Codes, Regulations, Standards, and other Documents	5185489	NT

Guidance:

The licensee should conduct self-assessments of safety culture periodically. The assessment method should be documented and the framework should include links to the safety culture characteristics: safety is a clearly recognized value, leadership is clear, accountability is clear, safety is integrated into all activities, safety is learning-driven and the work environment is safety conscious.

Guidance Documents

Document Number	Document Title	Version
CSA N286.0.1	Commentary on N286-12, Management system requirements for nuclear facilities	2014

SCA – HUMAN PERFORMANCE MANAGEMENT

Licence Condition 4.1: Human Performance Program

The licensee shall implement and maintain a human performance program.

Preamble:

The GNSCR requires the licensee to: ensure the presence of a sufficient number of qualified workers; train the workers; and to ensure the workers' follow procedures and safe work practices.

The C1NFR requires that an application for a licence shall contain the proposed human performance program for the activity to be licensed, including measures to ensure workers fitness for duty.

Human performance relates to reducing the likelihood of human error in work activities. It refers to the outcome of human behaviours, functions and actions in a specified environment, reflecting the ability of workers and management to meet the management system's defined performance under the conditions in which the management system will be employed.

Human factors are factors that influence human performance as it relates to the safety of a nuclear facility or activity over all the phases, including design, operation, maintenance, and decommissioning. These factors may include the characteristics of the person, task, equipment, organization, environment, and training. The application of human factors to issues such as interface design, training, procedures, organization, and job design may affect the reliability of humans performing tasks under various conditions.

The human performance program addresses and integrates the range of human factors that influence human performance, including but not limited to:

- The provision of qualified workers;
- The reduction of human error;
- Ensure fitness for duty;
- Organizational support for safe work activities;
- The continuous improvement of human performance; and
- Monitoring hours of work.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.2.4	Fitness for Duty, Volume I: Managing Worker Fatigue	2017	April 1, 2019
REGDOC-2.2.4	Fitness for Duty, Volume II: Managing Alcohol and Drug Use	2017	July 1, 2019

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514000-PDD-001	Performance Assurance	5185502	NT
900-514000-PRD-001	Performance Assurance	5185508	PN
900-514000-GDI-001	Performance Assurance	5185497	NT

Guidance:

The licensee should continuously monitor human performance, take steps to identify human performance weaknesses, improve human performance and reduce the likelihood of nuclear safety events with human performance-related causes and root causes.

Licence Condition 4.2: Training Program

The licensee shall implement and maintain a training program.

Preamble:

As defined by the GNSCR, a worker is a person who performs work that is referred to in a licence. This includes contractors and temporary employees. Training requirements apply equally to these types of workers as to the licensee’s own employees.

The GNSCR requires that licensees ensure that there are a sufficient number of properly trained and qualified workers to safely conduct the licensed activities.

The C1NFR require that applicants for a Class I facility licence describe the training programs which have been implemented, and that licence applications include the proposed responsibilities, qualification requirements, training program and requalification program for workers; along with the results that have been achieved in implementing the program for recruiting, training and qualifying workers.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.2.2	Personnel Training, version 2	2016	April 1, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510200-PDD-001	Training and Development	5185461	NT
900-510200-PRD-001	Training and Development	5185465	PN
900-510200-GDI-001	Training and Development	5262060	NT

The licensee shall ensure that all workers are qualified to perform the duties and tasks required of their position.

All training programs related to workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and licensed activities, are evaluated against the criteria for a systematic approach to training (SAT).

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Guidance:

None provided.

SCA – OPERATING PERFORMANCE

Licence Condition 5.1: Operational Reporting

The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

Preamble:

This requirement provides information to the CNSC on the results of its operations, its decommissioning activities, the results of the monitoring programs, any changes made to procedures, equipment, or structures, and a summary of any reports made pursuant to sections 29 and 30 of the GNSCR.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-3.1.2	Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills	2018	April 1, 2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-508760-PRO-001	Canadian Nuclear Laboratories Reporting of Unplanned Events and Situations to the Canadian Nuclear Safety Commission	5037780	NT

Guidance:

None provided.

SCA – SAFETY ANALYSIS

Licence Condition 6.1: Safety Analysis Program

The licensee shall maintain a safety report for the facility.

Preamble:

The GNSCR requires that a licence application contain a description and the results of any analyses performed.

The C1NFR requires, amongst other requirements, that a licence application contain a final safety analysis report, and additional supporting information.

The licensee holds the responsibility for ensuring that the safety analysis is accurate and meets the regulatory requirements.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
22-03610-SAR-001	Safety Analysis Report for the Douglas Point Waste Management Facility	5068806	ACC
900-508770-PDD-001	Safety Analysis	5292639	PN
900-508770-PRD-001	Safety Analysis	5292644	ACC
900-508770-GDI-001	Safety Analysis	5292635	PN

Every 5 years, the licensee shall review and revise, if necessary, the safety analysis report for the facility to confirm that the document accurately captures the condition of the facility and that the radiological consequences of accident scenarios do not exceed public dose limits. The safety analysis report review shall be submitted to CNSC staff.

Guidance:

Guidance Documents

Document Number	Document Title	Version
IAEA GSR Part 4, Rev. 1	Safety Assessment for Facilities and Activities	2016

SCA – PHYSICAL DESIGN

Licence Condition 7.1: Change to Design or Equipment

The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

Preamble:

The C1NFR requires that a licence application contain a description of the structures, systems and components, and relevant documentation of the facility design.

A design program ensures that the facility design is managed using a well-defined systematic approach.

Implementing and maintaining a design program confirms that safety-related SSCs and any modifications to them continue to meet their design bases given new information arising over time and taking changes in the external environment into account. It also confirms that SSCs continue to be able to perform their safety functions under all facility states. An important cross-cutting element of a design program is design basis management.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire Protection for Facilities that Process Handle, or Store Nuclear Substances	2013	July 25, 2014
	National Building Code of Canada	2015	2018

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-276	Human Factors Engineering Program Plans	2003
G-278	Human Factors Verification and Validation Plans	2003

SCA – FITNESS FOR SERVICE

Licence Condition 8.1: Fitness for Service Program

The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

Preamble:

The C1NFR requires that a licence application contain the proposed measures, policies, methods and procedures to maintain the nuclear facility.

The objective of an aging management plan is to ensure that the condition of critical systems, structures and components related to the safe decommissioning of the facility are understood and that activities have been put in place to assure their safe continued operation as they age. This is accomplished by establishing an integrated set of programs and activities that ensure that performance requirements for all critical systems, structures and components are met on an ongoing basis.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
22-00960-SWS-001	Douglas Point Waste Management Facility Storage with Surveillance Plan	4422646	ACC
22-08951-FHA-001	Douglas Point Waste Management Facility Fire Hazard Analysis	4002506	ACC
900-508230-PDD-001	Maintenance and Work Management	5198754	NT
900-508230-PRD-001	Maintenance and Work Management	5198756	PN
900-508230-GDI-001	Maintenance and Work Management	5198735	NT

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-2.6.3	Aging Management	2014

SCA – RADIATION PROTECTION

Licence Condition 9.1: Radiation Protection

The licensee shall implement and maintain a radiation protection program.

Preamble:

The *Radiation Protection Regulations* (RPR) requires that the licensee implement a radiation protection program and also ascertain and record doses for each person who performs any duties in connection with any activity that is authorized by the NSCA or is present at a place where that activity is carried out. This program must ensure that doses to persons do not exceed prescribed dose limits and are kept as low as reasonably achievable (ALARA), social and economic factors being taken into account. Also, the program ensures that occupational exposures are ascertained and recorded in accordance with the RPR through the establishment of dosimetry requirements.

The regulatory dose limits to workers and the public are explicitly provided in the RPR.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5222516	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5222521	ACC
900-508740-GDI-001	Radiation Protection Program Governing Documents Index	5222489	PN
900-508740-STD-005	Design and Modification Considerations	5763836	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004

Licence Condition 9.2: Radiation Protection Action Level Reporting

The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

Preamble:

The regulatory dose limits to workers and the public are explicitly provided in the RPR. The RPR also specifies the requirements related to action levels (ALs) and indicate that the licence will be used to identify their notification timeframes. ALs relate to the parameters of dose to workers.

ALs are designed to alert licensees before regulatory dose limits are reached. By definition, if an AL is reached, a loss of control of some part of the associated radiation protection program may have occurred, and specific action is required, as defined in the RPR and the licence. ALs are not intended to be static and are to reflect operating conditions at the DP site.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5507946	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5507946	ACC
900-508740-MCP-006	Action Levels for Internal and External Exposure	5453310	PN
900-508740-MCP-007	Dose Control Points	5371298	PN
900-508740-MCP-026	ALARA Review and Assessment - Planning and Control of Radiation Work	5371298	PN
CW-508740-REQ-112	Contamination Limits	3914857	PN

The current Action Levels are given in the following table:

Application	Action Level	Observations
<u>Dose to workers</u> Individual worker external radiation dose received during four week period	6 mSv (600 mrem)	The action Level is exceeded if a person receives an external radiation dose of greater than 6 mSv during a four week period.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004
G-228	Developing and Using Action Levels	2001

The licensee should conduct a documented review and, if necessary, revise the ALs at least once every five years in order to validate their effectiveness. The results of such reviews should be provided to CNSC staff.

SCA – CONVENTIONAL HEALTH AND SAFETY

Licence Condition 10.1: Conventional Health and Safety Program

The licensee shall implement and maintain a conventional health and safety program.

Preamble:

The C1NFR requires that a licence application contain the proposed worker health and safety policies and procedures.

Federally regulated sites are also subject to the requirements of *Canada Labour Code* and *Canada Occupational Health and Safety Regulations*.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510400-PDD-001	Occupational Safety and Health	5185473	NT
900-510400-PRD-001	Occupational Safety and Health	5242679	PN
900-510400-GDI-001	Occupational Safety and Health	5185470	NT

Guidance:

None provided.

SCA – ENVIRONMENTAL PROTECTION

Licence Condition 11.1: Environmental Protection Program

The licensee shall implement and maintain an environmental protection program.

Preamble:

The CINFR requires that a licence application contain information related to environmental protection. The GNSCR requires every licensee to take all reasonable precautions to protect the environment. The RPR prescribes the radiation dose limits for the general public of 1 mSv per calendar year.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.1	2017	April 1, 2018
N288.4	Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills	2010 (R2015)	April 1, 2018
N288.5	Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills	2011 (R2016)	2016
N288.6	Environmental risk assessment at Class I nuclear facilities and uranium mines and mills	2012 (R2017)	April 1, 2018
N288.7	Groundwater protection programs at Class I nuclear facilities and uranium mines and mills	2015	April 1, 2020
N288.8	Establishing and implementing action levels to control releases to the environment from nuclear facilities	2017	April 1, 2020

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-509200-PDD-001	Environmental Protection	5198856	PN
900-509200-PRD-001	Environmental Protection	5198861	ACC
900-509200-GDI-001	Environmental Protection	5198853	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
CSA N288.1	Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities	2014 (Update 1)

Licence Conditions: SCA – Environmental Protection

SCA – EMERGENCY MANAGEMENT AND FIRE PROTECTION

Licence Condition 12.1: Emergency Preparedness Program

The licensee shall implement and maintain an emergency preparedness and response program.

Preamble:

The CINFR requires measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including measures to assist, notify, report to offsite authorities including the testing of the implementation of these measures.

This licence condition requires the licensee to establish an emergency preparedness program to prepare for, to respond to, and to recover from the effects of accidental radiological/nuclear and/or hazardous substance release. As part of the emergency preparedness program, the licensee establishes an onsite emergency response plan and an emergency response organization and makes arrangements for coordinating offsite activities and cooperating with external response organizations throughout all phases of an emergency.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.10.1	Nuclear Emergency Preparedness and Response, Version 2	2016	April 1, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
22-08620-021-000-0001	Douglas Point Emergency Response Service Agreement	5068208	PN
900-508730-GDI-001	Emergency Preparedness	5185448	PN
900-508730-PRD-001	Emergency Preparedness	5185458	ACC
900-508730-PDD-001	Emergency Preparedness	5185454	PN

Guidance:

None provided.

Licence Condition 12.2: Fire Protection Program

The licensee shall implement and maintain a fire protection program.

Preamble:

Licensees require a comprehensive fire protection program (the set of planned, coordinated, controlled and documented activities) to ensure the licensed activities do not result in unreasonable risk to the health and safety of persons and to the environment due to fire and to ensure that the licensee is able to efficiently and effectively respond to emergency fire situations.

Fire protection provisions, including response, are required for the design, construction, commissioning, operation, and decommissioning of nuclear facilities, including structures, systems, and components (SSCs) that directly support the plant and the protected area.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire protection for facilities that process, handle, or store nuclear substances	2013 (R2016)	Dec 31, 2022
	<i>National Fire Code of Canada</i>	2015	2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
22-08951-FHA-001	Atomic Energy of Canada Limited Douglas Point Waste Management Facility Fire Hazards Analysis		ACC
900-508720-PRD-001	Fire Protection	5198849	ACC
900-508720-PDD-001	Fire Protection	5198844	NT
900-508720-GDI-001	Fire protection	5198843	NT

Guidance:

Where CSA N393 does not address a fire protection topic or issue in whole, or where additional guidance is beneficial, the standards and recommended practices set out by the NFPA are used as guidance by CNSC staff in determining the adequacy of a fire protection measure.

SCA – WASTE MANAGEMENT

Licence Condition 13.1: Waste Management Program

The licensee shall implement and maintain a waste management program.

Preamble:

The “waste management” safety and control area covers internal waste-related programs that form part of the facility’s operations up to the point where the waste is removed from the facility to a separate waste management facility. Topics include waste management, waste characterization, waste minimization and waste management practices.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N292.0	General principles for the management of radioactive waste and irradiated fuel	2014	April 1, 2018
CSA N292.3	Management of low- and intermediate-level radioactive waste	2014	April 1, 2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508600-GDI-001	Waste Management	5198807	NT
900-508600-PDD-001	Waste Management	5198811	NT
900-508600-PRD-001	Waste Management	5262060	ACC
CW-508600-PLA-002	CNL Integrated Waste Strategy	5198866	ACC

CNL shall characterize its waste streams and minimize the production of all wastes taking into consideration the health and safety of workers and the environment, integrate waste management programs as a key element of the facility’s safety culture, and regularly audit its program to maximize its efficiency.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-320	Assessing the Long term Safety of Radioactive Waste Management	2006
CSA N292.5	Guideline for the exemption or clearance from regulatory control of materials that contain, or potentially contain, nuclear substances	2011 (R2016)

Licence Condition 13.2: Preliminary Decommissioning Plan

The licensee shall maintain a preliminary decommissioning plan and cost estimate.

Preamble:

This LC requires that the licensee maintain a preliminary decommissioning plan (PDP).

A PDP provides an overview of the proposed decommissioning approach that is sufficiently detailed to assure that the proposed approach is, in the light of existing knowledge, technically and financially feasible, and appropriate in the interests of health, safety, security and the protection of the environment. The PDP defines areas to be decommissioned and the general structure and sequence of the principle work packages. The PDP forms the basis for establishing and maintaining a financial arrangement (financial guarantee) that will assure adequate funding of the decommissioning plan.

It is expected that the PDP will be revised as the conditions at the facility change. When the PDP is revised, the cost of decommissioning must be reviewed. At a minimum, the PDP must be reassessed every five years.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	PN
22-00960-PDP-001	Douglas Point Waste Management Facility Preliminary Decommissioning Plan	4992922	PN
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	441622	PN
900-508300-PDD-001	Decommissioning and Demolition	5198760	NT
900-508300-PRD-001	Decommissioning and Demolition	5198763	PN
900-508300-GDI-001	Decommissioning and Demolition	5198758	NT

The PDP shall be kept current to reflect any changes in the site or nuclear facility. The PDP shall be revised at a minimum every five years or when required by the Commission.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-219	Decommissioning Planning for Licensed Activities	2000
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – SECURITY

Licence Condition 14.1: Security Program

The licensee shall implement and maintain a security program.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The *Nuclear Security Regulations* (NSR) require that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508710-PDD-001	Security	5198826	NT
900-508710-PRD-001	Security	5198837	PN
900-508710-GDI-001	Security	5198818	NT
900-511400-PDD-001	Cyber Security		NT
900-511400-PRD-001	Cyber Security		PN
900-511400-GDI-001	Cyber Security		NT

Guidance:

Guidance Documents

Document Number	Document Title	Version
CNSC	Criteria for Physical Protection Systems and Devices at High-Security Sites	RD-321
CNSC	Nuclear Security Officer Medical, Physical, and Psychological Fitness	RD-363
CNSC	Security of Nuclear Substances – Sealed Sources	REGDOC-2.12.3
CNSC	Site Access Security Clearance	REGDOC-2.12.2

Licence Condition 14.2: Security Arrangements for Decommissioning

The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that would result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The NSR requires that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

The NSR requires that a licensee of a high-security site:

- maintain at all times a qualified onsite nuclear response force;
- obtain the applicable certifications, before issuing an authorization to a nuclear security officer;
- prevent and detect unauthorized entry into a protected area or inner area; and
- prevent unauthorized entry of weapons and explosive substances into a protected area or inner area.

Compliance Verification Criteria:

The licensee shall submit the proposed security arrangements and measures for any modifications to the protected area that may be associated with the dismantlement activities.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-274	Security Programs for Category I or II Nuclear Material or Certain Nuclear Facilities	2003

SCA – SAFEGUARDS AND NON-PROLIFERATION

Licence Condition 15.1: Safeguards Program

The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

Preamble:

The GNSCR requires the licensee to take all necessary measures to facilitate Canada’s compliance with any applicable safeguards agreement.

The C1NFR requires that a licence application contain information on the licensee’s proposed measures to facilitate Canada’s compliance with any applicable safeguards agreement.

Canada has entered into a safeguards agreement with the IAEA pursuant to its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. The objective of the Canada/IAEA Safeguards Agreement is for the IAEA to provide assurance on an annual basis to Canada and to the international community that all declared nuclear materials are in peaceful, non-explosive uses and that there is no indication of undeclared nuclear materials or activities. This conclusion confirms that Canada is in compliance with its obligations under the following Canada/IAEA Safeguards Agreement:

- *Treaty on the Non-Proliferation of Nuclear Weapons;*
- *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons; and*
- *Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons.*

These are reproduced in information circulars INFCIRC/140, INFCIRC/164, and INFCIRC/164/Add. 1.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.13.1	Safeguards and Nuclear Material Accountancy	2018	October, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508510-PDD-001	Nuclear Materials and Safeguards Management	5198783	NT
900-508510-PRD-001	Nuclear Materials and Safeguards Management	5198784	PN
900-508510-GDI-001	Nuclear Materials and Safeguards Management	5198767	NT

Guidance:

None provided.

SCA – PACKAGING AND TRANSPORT

Licence Condition 16.1: Packaging and Transport Program

The licensee shall implement and maintain a packaging and transport program.

Preamble:

The C1NFR requires that a licence application contain information on the proposed procedures for transporting nuclear substances.

Every person who transports radioactive material, or requires it to be transported, shall act in accordance with the requirements of the *Transportation of Dangerous Goods Regulations (TDGR)* and the *Packaging and Transport of Nuclear Substances Regulations, 2015 (PTNSR)*.

The PTNSR and the TDGR provide specific requirements for the design of transport packages, the packaging, marking and labeling of packages and the handling and transport of nuclear substances.

Compliance Verification Criteria:

The licensee shall implement and maintain a packaging and transport program that will ensure compliance with the requirements of the TDGR and the PTNSR.

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508520-PDD-001	Transportation of Dangerous Goods	5198788	NT
900-508520-PRD-001	Transportation of Dangerous Goods	5198791	PN
900-508520-GDI-001	Transportation of Dangerous Goods	5198787	NT

Guidance:

None provided.

APPENDIX A: DEFINITIONS AND ACRONYMS

1. DEFINITIONS

Terms and expressions used in the LCH are consistent with the definitions provided in the NSCA, the regulations made pursuant to the NSCA, or in the CNSC regulatory document REGDOC-3.6 *Glossary of CNSC Terminology*.

2. ACRONYMS LIST

Acronym	Definition
AECL	Atomic Energy of Canada Limited
AL	Action Level
ALARA	As Low As Reasonably Achievable
CINFR	<i>The Class I Nuclear Facilities Regulations</i>
CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
DG	Director General
DNCFR	Directorate of Nuclear Cycle and Facilities Regulation
DSC	Dry Storage Container
EVP ROB	Executive Vice-President Regulatory Operations Branch
GNSCR	<i>The General Nuclear Safety and Control Regulations</i>
IAEA	International Atomic Energy Agency
INFCIRC	Information Circular
LC	Licence Condition
LCH	Licence Conditions Handbook
NGS	Nuclear Generating Station
NRC	National Research Council
NRCan	Natural Resources Canada
NSR	<i>The Nuclear Security Regulations</i>
NSCA	<i>Nuclear Safety and Control Act</i>
OP&P	Operating Policies and Principles
OPEX	Operating Experience
PDP	Preliminary Decommissioning Plan
RD	Regulatory Document
RP	Radiation Protection
RPR	<i>The Radiation Protection Regulations</i>
SCA	Safety and Control Area
WF DL	Waste Facility Decommissioning Licence

MCP PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DE GENTILLY-1

Le Manuel des conditions de permis proposé pour l'installation de gestion des déchets de Gentilly-1 est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5698683 (Word)

e-Doc 5734993 (PDF)



PDF Ref: e-Doc 5734993

Word Ref: e-Doc 5698683

File No.: 2.14

LICENCE CONDITIONS HANDBOOK

WFDL-LCH-W4-331.00/2034

PROTOTYPE WASTE FACILITIES – WASTE FACILITY DECOMMISSIONING LICENCE

GENTILLY-1 WASTE MANAGEMENT FACILITY

WFDL-W4-331.00/2034

Revision 0

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DRAFT

**Licence Conditions Handbook
(WFDL-LCH-W4-331.00/2034,
Revision 0)**

Effective: DATE, YEAR

**Prototype Waste Facilities – Waste Facility
Decommissioning Licence
Gentilly-1 Waste Management Facility
WFDL-W4-331.00/2034 (Effective: DATE, YEAR)**

SIGNED at OTTAWA this Xth day of MONTH, YEAR

Kavita Murthy, Director

**Canadian Nuclear Laboratories Regulatory Program Division
Directorate of Nuclear Cycle and Facilities Regulations
CANADIAN NUCLEAR SAFETY COMMISSION**

REVISION HISTORY:

Effective Date	Rev. #	e-Doc #	Description	CAF e-Doc #
			New document	

DRAFT

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INTRODUCTION

The general purpose of the Licence Conditions Handbook (LCH) is to identify and clarify the relevant parts of the licensing basis for each licence condition. This will help ensure that the licensee performs the licensed activities for the facility in accordance with the licensing basis and intent of the licence. The LCH should be read in conjunction with the licence.

The LCH typically has three parts under each licence condition: the Preamble, Compliance Verification Criteria (CVC), and Guidance. The Preamble explains, as needed, the regulatory context, background, and/or history related to the licence condition. CVC are criteria used by CNSC staff to verify and oversee compliance with the licence condition. Guidance is non-mandatory information, including direction on how to comply with the licence condition.

Current versions of the licensing basis publications, licensee documents that require notification of change, and guidance documents referenced in the LCH are tracked in the document *Licensing Documents for Prototype Waste Facilities*, which is controlled by the Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD) and is available to the licensee upon request.

Appendix A of this LCH provides definitions of terms and a list of acronyms used throughout the LCH.

Where delegation of the Commission's authority to CNSC staff has been granted by the Commission, "a person authorized by the Commission" means CNSC staff as long as the consent is within the authority that can be delegated under the Act and within the licensing basis. For this facility, the following CNSC staff have been granted this authority:

- Director, Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD)
- Director General, Directorate of Nuclear Cycle and Facilities Regulation (DG DNCFR),
- Executive Vice-President, Regulatory Operations Branch (EVP ROB).

More information on the LCH is available in the CNSC document titled *How to Write a Licence Conditions Handbook* (LCH) (e-Doc 4967591).

G. GENERAL

Licence Condition 1.1: Conduct of Activities

The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.

Preamble:

The licence is issued by the Commission pursuant to section 24 of the *Nuclear Safety and Control Act* (NSCA) while the licensing basis is defined by the CNSC in CNSC Regulatory Document REGDOC 3.5.3 Regulatory Fundamentals.

The Gentilly-1 Waste Management Facility (G1WF) is located in Bécancour, Quebec, on the south bank of the St. Lawrence River. The site located approximately 14 km in a direct line east from the city of Trois-Rivières. The G1WF is adjacent to the Gentilly-2 (G-2) Nuclear Generating Station (NGS), owned by Hydro-Québec. The location of the Gentilly site, including both the G1WF and G-2 NGS is shown in Figure 2-2 of the Gentilly-1 Storage-with-Surveillance Safety Analysis Report; 61-508770-REPT-001.

Compliance Verification Criteria:

Part (i) of the Licensing Basis

Part (i) of the licensing basis refers to applicable laws and regulations. There are many federal and provincial acts and regulations, and international laws, agreements, guidelines, etc., applicable to activities performed at a licensed facility.

Part (ii) of the Licensing Basis

Part (ii) of the licensing basis refers to the conditions and the safety and control measures included in this licence and in the documents directly referenced in the licence.

The licence requires the licensee to implement and maintain certain programs. There are no documents directly referenced in the standardized licence, those documents are now referenced in the LCH.

For the purpose of licence requirement, a program may be a series of documented, coordinated activities, not necessarily a single document.

Part (iii) of the Licensing Basis

Part (iii) of the licensing basis refers to the safety and control measures described in the licence application and the documents needed to support that licence application. The safety and control measures include important aspects of that documentation such as, but not limited to:

- the facility-specific design basis and operational information documented in the most recent safety analysis and operational limits and conditions documents;
- the licensee's written commitments, including all modifications and additions to such commitments over the duration of the licence that were made in formal correspondence, and in effect for ensuring compliance with, and conduct of licensed activities within applicable CNSC requirements, including: licensee responses to CNSC enforcement actions; licensee responses to CNSC inspections; licensee responses to CNSC requests; and licensee event reports.

Part (iii) of the licensing basis also includes safety and control measures outlined in CNSC regulatory documents, CSA standards, and other standards, codes and references that are cited in the application or in the licensee's supporting documentation.

Applicable licensee documents are listed in the LCH under the heading "Licensee Documents that Require Notification of Change". Applicable CNSC regulatory documents, CSA standards and other documents are listed in the LCH under the heading "Licensing Basis Publications". The documents listed in the LCH could cite other documents that also contain safety and control measures (i.e., there may be safety and control measures in "nested" references in the application). The documents listed in the LCH and their "nested" references define the licensing basis for the programs required by this licence.

Regulatory Role of the Licensing Basis

The licensing basis is established when the Commission renders its decision regarding the licence application.

Licence condition 1.1 requires the licensee to conduct the licensed activities in accordance with the licensing basis. For activities that are not in accordance with the licensing basis, the licensee shall take action as soon as practicable to return to a state consistent with the licensing basis, taking into account the risk significance of the situation.

This licence condition is not intended to unduly inhibit the ongoing management and operation of the facility or the licensee's ability to adapt to changing circumstances and continuously improve. This licence condition does not explicitly prohibit changes (such as in management or operation) with a neutral or positive impact on safety. Changes shall be compliant with the licensing basis, shall be made according to the licensee's management system (licence condition 3.1) and shall be made in accordance with licence condition 1.4.

CNSC Staff's Approach to Assessing the Licensing Basis

For any proposed activity/facility to be carried out at the site, CNSC staff will review the information submitted by CNL to determine if the proposed activity/facility remains within the licensing basis. CNL may proceed with the proposed initiatives if they are found to be within the licensing basis.

CNSC staff assess a proposed facility/activity as being within the licensing basis based on changes or impact on the overall safety of the site.

CNSC staff will submit to the Commission for consideration any proposed activity or facility which CNSC staff consider to be outside the licensing basis. If the Commission grants approval to such an activity/facility, this activity/facility will become part of the licensing basis and reflected in updates to LCH as appropriate.

Activities Included in the Licensing Basis

Conduct of licensed activities at the site include:

- (a) decommission the G1WF, as further described and located on the sites defined in the WFDL-W4-331.00/2034 LICENCE CONDITIONS HANDBOOK (LCH);
- (b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
- (c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b).

As per the Record of Proceedings dated July 16, 2014 (e-Doc 4471304), the Waste Facility Decommissioning Licence solely authorizes continued storage-with-surveillance activities at the site. Prior to entering active decommissioning, CNL would be required to submit a detailed decommissioning plan.

Licence Application Documents and Supporting Documents

Document Number	Document Title	e-Doc
3640-ACNO-14-0004-L	Application to Replace Waste Facility Operating Licences for AECL Prototype Reactor Waste Management Facilities: Nuclear Power Demonstration (NPD), Douglas Point and Gentilly-1	4413446
145-ACNO-14-0021-L	AECL Transfer of Commission Licences to the Canadian Nuclear Laboratories Limited and Associated Applications for Exemption from Regulations	4483033

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-3.5.3	Regulatory Fundamentals	2018

When the licensee becomes aware that a proposed change or activity might be outside the licensing basis, it should first seek direction from CNSC staff regarding the potential acceptability of this change or activity. The licensee should take into account that certain types of proposed changes might require significant lead times before CNSC staff can make recommendations and/or the Commission can properly consider them.

Licence Condition 1.2: Inconsistencies

The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

Preamble:

None provided.

Compliance Verification Criteria:

In the event of any conflict or inconsistency between two elements of the licensing basis, the licensee shall direct the conflict or inconsistency to CNSC staff for resolution.

Guidance:

None provided.

Licence Condition 1.3: Decommissioning Policies and Programs

The licensee shall implement and maintain decommissioning policies, programs and procedures.

Preamble:

The *Class I Nuclear Facilities Regulations* (C1NFR) require that an application for a licence to decommission a Class I nuclear facility contain proposed measures, methods and procedures for carrying on the decommissioning.

This licence condition requires that the licensee implement and maintain adequate decommissioning policies, programs and procedures. These:

- define the operating rules consistent with the safety report and other licensing support documentation within which the facility will be maintained
- specify the authorities of facility staff to make decisions within the defined boundaries and,
- identify and differentiate between actions where discretion may be applied and where jurisdictional authorization is required.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009	July 25, 2014

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
61-508330-SWS-001,	Gentilly-1 Waste Management Facility Storage with Surveillance Plan	4700734	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
61-508310-PDP-001	Gentilly-1 Waste Management Facility Preliminary Decommissioning Plan	4618697	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

Guidance:

None provided.

Licence Condition 1.4: Changes to Polices, Programs and Procedures

The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.

Preamble:

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity and thus establishes the basis for the CNSC's compliance program in respect of that regulated facility or activity. Licensees are required to conduct the licensed activities in accordance with the licensing basis; however, as changes to the facility, or to the documents included or referenced in the licence application are to be expected during the licensing period, licensees are expected to assess changes for impact on the licensing basis. Any changes to the licensing basis require evaluation to determine impact as related to the provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

In general, it is expected that changes for which the licensee shall notify the CNSC will be captured as changes to specific licensee documents. The LCH identifies licensee documents that require written notification of changes to the CNSC. They are selected from the set of documents supporting the application and which describe the licensee's safety and control measures (part (iii) of the licensing basis). In identifying the appropriate documents for each LC, CNSC staff select licensee documents that provide reasonable assurance that adequate safety and control measures are in place to satisfy the LC. See LC 1.1 for additional discussion on the licensing basis.

Compliance Verification Criteria:

The licensee shall notify CNSC staff of changes to licensee's documents identified in the LCH. The notification shall identify if the changes are administrative in nature, or affect the licensing basis. The written notification of change shall include a copy of the revised document.

Licensee documents listed in the LCH (under each specific licence condition) are subdivided into groups having different requirements for notification of change.

- ACC CNSC staff acceptance of changes is required before proceeding with change
- PN prior notification - the licensee shall submit the notice to the CNSC prior to implementing the change; typically, the requirement is to submit the proposed changes 30 days prior to planned implementation; however, the licensee shall allow sufficient time for the CNSC to review the change proportionate to its complexity and the importance of the safety and control measures being affected
- NT notification at time of making the change

Changes that may affect the licensing basis, including any change that is not captured as a change to a document listed in the LCH (e.g., construction of new facilities/buildings, or transitioning any facility/building from one phase of its life cycle to another), requires written notification to the CNSC to verify they are in accordance with the licensing basis.

For any change that is outside the licensing basis, the licensee shall obtain Commission approval before proceeding with the change.

Guidance:

None provided.

Licence Condition 1.5: Contractors

The licensee shall ensure that every contractor working at the facility complies with this licence.

Preamble:

The *General Nuclear Safety and Control Regulations* (GNSCR), defines the obligations of the licensee. As part of the licensee's operations, contractors may be employed for activities within the boundaries of the licensed facility. Through the implementation of 'construction islands', the contractor has authority within the area to manage its own activities. However, this does not relieve the licensee of its obligations under the NSCA and the licence that was issued.

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Compliance Verification Criteria:

The management of contractors will be evaluated against the following elements and principles:

- The risks to contractors and risks to the organization from the use of contractors are evaluated to identify, assess, and eliminate or control hazards;
- Contractors are adequately trained in up-to-date procedures and are qualified and competent (i.e., knowledge, skills, and abilities) to conduct work within the licensed facility;
- Work carried out by the contractor is approved by competent members of the licensee's staff and monitored by qualified personnel.

Guidance:

None provided.

Licence Condition 1.6: Licensee Commitments

The licensee shall comply with all licensee commitments as defined in the WFDL-W4-331.00/2034 LCH.

Preamble:

The commitments referred to in Licence Condition 1.6 are all met.

Compliance Verification Criteria:

None provided.

Guidance:

None provided.

Licence Condition 1.7: Public Information and Disclosure Program

The licensee shall implement and maintain a public information program and disclosure program.

Preamble:

The C1NFR requires that an application for a licence shall contain the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed.

The primary goal of the public information program, as it relates to the licensed activities, is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. The public information program includes a public disclosure protocol describing the information and the medium of disclosure in regard to information and reports of interest to the public.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
RD/GD-99.3	Public Information and Disclosure	2012	July 25, 2014

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-513430-REPT-001	Public Information Program for Canadian Nuclear Laboratories (CNL)	5252468	NT

Guidance:

None provided.

DECOMMISSIONING

Licence Condition 2.1: Decommissioning Plans

The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.

Preamble:

The C1NFR requires that a licence application contain the proposed plan for decommissioning of the nuclear facility or of the site.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	July 25, 2014
G-219	Decommissioning planning for licensed activities	2000	July 25, 2014

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
CW-508300-OV-146	Decommissioning Process Overview	4257057	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

The licensing basis for the G1WF only authorizes CNL to conduct activities related to the “Storage-with-Surveillance” phase.

Release from Regulatory Control

The licensee shall only release the decommissioned property, or any part thereof, for reuse upon acceptance of the final end-state report by the CNSC.

Guidance:

None provided.

Licence Condition 2.2: Financial Guarantee

The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application include any proposed financial guarantee relating to the activity to be licensed.

The financial guarantee for decommission a nuclear facility consists of one or more financial guarantee instruments which are based on the decommissioning strategy described in the comprehensive preliminary decommissioning plan and the associated cost estimate.

Atomic Energy of Canada Limited (AECL) is a Schedule III, Part 1 Crown Corporation under the *Financial Administration Act* and an agent of Her Majesty in Right of Canada. As an agent of Her Majesty in Right of Canada, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada. While the restructuring of AECL has seen the ownership of Canadian Nuclear Laboratories Limited (CNL) transferred to a private-sector contractor, the Canadian National Energy Alliance (CNEA), AECL retains ownership of the lands, assets and liabilities associated with CNL's licences. These liabilities have been officially recognized by the Minister of Natural Resources in a letter dated July 31, 2015 (e-Doc 4815508).

Compliance Verification Criteria:

The financial guarantee for decommissioning shall be reviewed and revised by the licensee every 5 years, when requested by the CNSC, or following a revision to the cost estimate for decommissioning or changes to the decommissioning strategy which significantly impacts the financial guarantee. The next revision of the financial guarantee is due by July 31, 2020.

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
145-NRCANNO-15-0.001	Relating to Provision of Financial Guarantees for AECL Sites	4815508	N/A

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – MANAGEMENT SYSTEM

Licence Condition 3.1: Management System

The licensee shall implement and maintain a management system.

Preamble:

The CINFR requires that an application for a licence shall contain the proposed management system for the activity to be licensed, including measures to foster a healthy safety culture.

Safe and reliable operation of nuclear facilities requires a commitment and adherence to a set of management system principles and, consistent with those principles, the implementation of planned and systematic processes that achieve expected results. The management system focuses on safety in all business activities.

The management system is in place to satisfy the requirements set out in the NSCA, regulations made pursuant to the NSCA, the licence and the measures necessary to ensure that safety is of paramount consideration in the implementation of the management system. The management system promotes and supports a healthy safety culture by integrating the characteristics of a healthy safety culture:

- Safety is a clearly recognized value;
- Accountability for safety is clear;
- Safety is integrated into all activities;
- A safety leadership process exists; and
- Safety culture is learning driven

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N286	Management system requirements for nuclear facilities	2012	

Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514100-MAN-001	Management System	5185520	ACC
900-514200-MAN-001	Quality Assurance	5185528	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
900-514300-LST-001	Site Licences, Certificates, Permits and Representatives	5185538	NT
900-513000-LST-001	Codes, Regulations, Standards, and other Documents	5185489	NT

Guidance:

The licensee should conduct self-assessments of safety culture periodically. The assessment method should be documented and the framework should include links to the safety culture characteristics: safety is a clearly recognized value, leadership is clear, accountability is clear, safety is integrated into all activities, safety is learning-driven and the work environment is safety conscious.

Guidance Documents

Document Number	Document Title	Version
REGDOC-2.1.2	Safety Culture	
CSA N286.0.1	Commentary on N286-12, Management system requirements for nuclear facilities	2014

SCA – HUMAN PERFORMANCE MANAGEMENT

Licence Condition 4.1: Human Performance Program

The licensee shall implement and maintain a human performance program.

Preamble:

The GNSCR requires the licensee to: ensure the presence of a sufficient number of qualified workers; train the workers; and to ensure the workers' follow procedures and safe work practices.

The C1NFR requires that an application for a licence shall contain the proposed human performance program for the activity to be licensed, including measures to ensure workers fitness for duty.

Human performance relates to reducing the likelihood of human error in work activities. It refers to the outcome of human behaviours, functions and actions in a specified environment, reflecting the ability of workers and management to meet the management system's defined performance under the conditions in which the management system will be employed.

Human factors are factors that influence human performance as it relates to the safety of a nuclear facility or activity over all the phases, including design, operation, maintenance, and decommissioning. These factors may include the characteristics of the person, task, equipment, organization, environment, and training. The application of human factors to issues such as interface design, training, procedures, organization, and job design may affect the reliability of humans performing tasks under various conditions.

The human performance program addresses and integrates the range of human factors that influence human performance, including but not limited to:

- The provision of qualified workers;
- The reduction of human error;
- Ensure fitness for duty;
- Organizational support for safe work activities;
- The continuous improvement of human performance; and
- Monitoring hours of work.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.2.4	Fitness for Duty, Volume I: Managing Worker Fatigue	2017	April 1, 2019
REGDOC-2.2.4	Fitness for Duty, Volume II: Managing Alcohol and Drug Use	2017	July 1, 2019

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514000-PDD-001	Performance Assurance	5185502	NT
900-514000-PRD-001	Performance Assurance	5185508	PN
900-514000-GDI-001	Performance Assurance	5185497	NT

Guidance:

The licensee should continuously monitor human performance, take steps to identify human performance weaknesses, improve human performance and reduce the likelihood of nuclear safety events with human performance-related causes and root causes.

Licence Condition 4.2: Training Program

The licensee shall implement and maintain a training program.

Preamble:

As defined by the GNSCR, a worker is a person who performs work that is referred to in a licence. This includes contractors and temporary employees. Training requirements apply equally to these types of workers as to the licensee's own employees.

The GNSCR requires that licensees ensure that there are a sufficient number of properly trained and qualified workers to safely conduct the licensed activities.

The C1NFR require that applicants for a Class I facility licence describe the training programs which have been implemented, and that licence applications include the proposed responsibilities, qualification requirements, training program and requalification program for workers; along with the results that have been achieved in implementing the program for recruiting, training and qualifying workers.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.2.2	Personnel Training, version 2	2016	April 1, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510200-PDD-001	Training and Development	5185461	NT
900-510200-PRD-001	Training and Development	5185465	PN
900-510200-GDI-001	Training and Development	5262060	NT

The licensee shall ensure that all workers are qualified to perform the duties and tasks required of their position.

All training programs related to workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and licensed activities, are evaluated against the criteria for a systematic approach to training (SAT).

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Guidance:

None provided.

SCA – OPERATING PERFORMANCE

Licence Condition 5.1: Operational Reporting

The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

Preamble:

This requirement provides information to the CNSC on the results of its operations, its decommissioning activities, the results of the monitoring programs, any changes made to procedures, equipment, or structures, and a summary of any reports made pursuant to sections 29 and 30 of the GNSCR.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-3.1.2	Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills	2018	April 1, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-508760-PRO-001	Canadian Nuclear Laboratories Reporting of Unplanned Events and Situations to the Canadian Nuclear Safety Commission	5037780	NT

Guidance:

None provided.

SCA – SAFETY ANALYSIS

Licence Condition 6.1: Safety Analysis Program

The licensee shall maintain a safety report for the facility.

Preamble:

The GN SCR requires that a licence application contain a description and the results of any analyses performed.

The C1NFR requires, amongst other requirements, that a licence application contain a final safety analysis report, and additional supporting information.

The licensee holds the responsibility for ensuring that the safety analysis is accurate and meets the regulatory requirements.

Compliance Verification Criteria:

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
61-508770-REPT-001	Gentilly-1 Storage with Surveillance Safety Analysis Report	4399610	ACC
900-508770-PDD-001	Safety Analysis	5292639	PN
900-508770-PRD-001	Safety Analysis	5292644	ACC
900-508770-GDI-001	Safety Analysis	5292635	PN

Every 5 years, the licensee shall review and revise, if necessary, the safety analysis report for the facility to confirm that the document accurately captures the condition of the facility and that the radiological consequences of accident scenarios do not exceed public dose limits. The safety analysis report review shall be submitted to CNSC staff.

Guidance:

Guidance Documents

Document Number	Document Title	Version
IAEA GSR Part 4, Rev. 1	Safety Assessment for Facilities and Activities	2016

SCA – PHYSICAL DESIGN

Licence Condition 7.1: Change to Design or Equipment

The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

Preamble:

The C1NFR requires that a licence application contain a description of the structures, systems and components, and relevant documentation of the facility design.

A design program ensures that the facility design is managed using a well-defined systematic approach.

Implementing and maintaining a design program confirms that safety-related SSCs and any modifications to them continue to meet their design bases given new information arising over time and taking changes in the external environment into account. It also confirms that SSCs continue to be able to perform their safety functions under all facility states. An important cross-cutting element of a design program is design basis management.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire Protection for Facilities that Process Handle, or Store Nuclear Substances	2013	July 25, 2014
	National Building Code of Canada	2015	2018

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-276	Human Factors Engineering Program Plans	2003
G-278	Human Factors Verification and Validation Plans	2003

SCA – FITNESS FOR SERVICE

Licence Condition 8.1: Fitness for Service Program

The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

Preamble:

The CINFR requires that a licence application contain the proposed measures, policies, methods and procedures to maintain the nuclear facility.

The objective of an aging management plan is to ensure that the condition of critical systems, structures and components related to the safe decommissioning of the facility are understood and that activities have been put in place to assure their safe continued operation as they age. This is accomplished by establishing an integrated set of programs and activities that ensure that performance requirements for all critical systems, structures and components are met on an ongoing basis.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
61-508330-SWS-001	Gentilly-1 Waste Management Facility Storage with Surveillance Plan	3953992	ACC
61-508330-FHA-002	Gentilly-1 Waste Management Facility fire Hazard Analysis	4131005	ACC
900-508230-PDD-001	Maintenance and Work Management	5198754	NT
900-508230-PRD-001	Maintenance and Work Management	5198756	PN
900-508230-GDI-001	Maintenance and Work Management	5198735	NT

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-2.6.3	Aging Management	2014

SCA – RADIATION PROTECTION

Licence Condition 9.1: Radiation Protection

The licensee shall implement and maintain a radiation protection program.

Preamble:

The *Radiation Protection Regulations* (RPR) requires that the licensee implement a radiation protection program and also ascertain and record doses for each person who performs any duties in connection with any activity that is authorized by the NSCA or is present at a place where that activity is carried out. This program must ensure that doses to persons do not exceed prescribed dose limits and are kept as low as reasonably achievable (ALARA), social and economic factors being taken into account. Also, the program ensures that occupational exposures are ascertained and recorded in accordance with the RPR through the establishment of dosimetry requirements.

The regulatory dose limits to workers and the public are explicitly provided in the RPR.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5222516	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5222521	ACC
900-508740-GDI-001	Radiation Protection Program Governing Documents Index	5222489	PN
900-508740-STD-005	Design and Modification Considerations	5763836	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004

Licence Condition 9.2: Radiation Protection Action Level Reporting

The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

Preamble:

The regulatory dose limits to workers and the public are explicitly provided in the RPR. The RPR also specifies the requirements related to action levels (ALs) and indicate that the licence will be used to identify their notification timeframes. ALs relate to the parameters of dose to workers.

ALs are designed to alert licensees before regulatory dose limits are reached. By definition, if an AL is reached, a loss of control of some part of the associated radiation protection program may have occurred, and specific action is required, as defined in the RPR and the licence. ALs are not intended to be static and are to reflect operating conditions at the G-1 site.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5507946	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5507946	ACC
900-508740-MCP-006	Action Levels for Internal and External Exposure	5371298	PN
900-508740-MCP-007	Dose Control Points	5371298	PN
900-508740-MCP-026	ALARA Review and Assessment - Planning and Control of Radiation Work	5371298	PN
CW-508740-REQ-112	Contamination Limits	3914857	PN

The current Action Levels are given in the following table:

Application	Action Level	Observations
<u>Dose to workers</u> Individual worker external radiation dose received during four week period	6 mSv (600 mrem)	The action Level is exceeded if a person receives an external radiation dose of greater than 6 mSv during a four week period.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004
G-228	Developing and Using Action Levels	2001

The licensee should conduct a documented review and, if necessary, revise the ALs at least once every five years in order to validate their effectiveness. The results of such reviews should be provided to CNSC staff.

SCA – CONVENTIONAL HEALTH AND SAFETY

Licence Condition 10.1: Conventional Health and Safety Program

The licensee shall implement and maintain a conventional health and safety program.

Preamble:

The C1NFR requires that a licence application contain the proposed worker health and safety policies and procedures.

Federally regulated sites are also subject to the requirements of *Canada Labour Code* and *Canada Occupational Health and Safety Regulations*.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510400-PDD-001	Occupational Safety and Health	5185473	NT
900-510400-PRD-001	Occupational Safety and Health	5242679	PN
900-510400-GDI-001	Occupational Safety and Health	5185470	NT

Guidance:

None provided.

SCA – ENVIRONMENTAL PROTECTION

Licence Condition 11.1: Environmental Protection Program

The licensee shall implement and maintain an environmental protection program.

Preamble:

The C1NFR requires that a licence application contain information related to environmental protection. The GNSCR requires every licensee to take all reasonable precautions to protect the environment. The RPR prescribes the radiation dose limits for the general public of 1 mSv per calendar year.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.1	2017	April 1, 2018
N288.4	Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills	2010 (R2015)	April 1, 2018
N288.5	Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills	2011 (R2016)	2016
N288.6	Environmental risk assessment at Class I nuclear facilities and uranium mines and mills	2012 (R2017)	April 1, 2018
N288.7	Groundwater protection programs at Class I nuclear facilities and uranium mines and mills	2015	April 1, 2020
N288.8	Establishing and implementing action levels to control releases to the environment from nuclear facilities	2017	April 1, 2020

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-509200-PDD-001	Environmental Protection	5198856	PN
900-509200-PRD-001	Environmental Protection	5198861	ACC
900-509200-GDI-001	Environmental Protection	5198853	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
CSA N288.1	Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities	2014 (Update 1)

SCA – EMERGENCY MANAGEMENT AND FIRE PROTECTION

Licence Condition 12.1: Emergency Preparedness Program

The licensee shall implement and maintain an emergency preparedness and response program.

Preamble:

The C1NFR requires measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including measures to assist, notify, report to offsite authorities including the testing of the implementation of these measures.

This licence condition requires the licensee to establish an emergency preparedness program to prepare for, to respond to, and to recover from the effects of accidental radiological/nuclear and/or hazardous substance release. As part of the emergency preparedness program, the licensee establishes an onsite emergency response plan and an emergency response organization and makes arrangements for coordinating offsite activities and cooperating with external response organizations throughout all phases of an emergency.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.10.1	Nuclear Emergency Preparedness and Response, Version 2	2016	April 1, 2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508730-GDI-001	Emergency Preparedness	5185448	PN
900-508730-PRD-001	Emergency Preparedness	5185458	ACC
900-508730-PDD-001	Emergency Preparedness	5185454	PN

Guidance:

None provided.

Licence Condition 12.2: Fire Protection Program

The licensee shall implement and maintain a fire protection program.

Preamble:

Licensees require a comprehensive fire protection program (the set of planned, coordinated, controlled and documented activities) to ensure the licensed activities do not result in unreasonable risk to the health and safety of persons and to the environment due to fire and to ensure that the licensee is able to efficiently and effectively respond to emergency fire situations.

Fire protection provisions, including response, are required for the design, construction, commissioning, operation, and decommissioning of nuclear facilities, including structures, systems, and components (SSCs) that directly support the plant and the protected area.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire protection for facilities that process, handle, or store nuclear substances	2013 (R2016)	Dec 31, 2022
	<i>National Fire Code of Canada</i>	2015	2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508720-PRD-001	Fire Protection	5198849	ACC
900-508720-PDD-001	Fire Protection	5198844	NT
900-508720-GDI-001	Fire protection	5198843	NT

Guidance:

Where CSA N393 does not address a fire protection topic or issue in whole, or where additional guidance is beneficial, the standards and recommended practices set out by the NFPA are used as guidance by CNSC staff in determining the adequacy of a fire protection measure.

SCA – WASTE MANAGEMENT

Licence Condition 13.1: Waste Management Program

The licensee shall implement and maintain a waste management program.

Preamble:

The “waste management” safety and control area covers internal waste-related programs that form part of the facility’s operations up to the point where the waste is removed from the facility to a separate waste management facility. Topics include waste management, waste characterization, waste minimization and waste management practices.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N292.0	General principles for the management of radioactive waste and irradiated fuel	2014	April 1, 2018
CSA N292.3	Management of low- and intermediate-level radioactive waste	2014	April 1, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508600-GDI-001	Waste Management	5198807	NT
900-508600-PDD-001	Waste Management	5198811	NT
900-508600-PRD-001	Waste Management	5262060	ACC
CW-508600-PLA-002	CNL Integrated Waste Strategy	5198866	ACC

CNL shall characterize its waste streams and minimize the production of all wastes taking into consideration the health and safety of workers and the environment, integrate waste management programs as a key element of the facility’s safety culture, and regularly audit its program to maximize its efficiency.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-320	Assessing the Long term Safety of Radioactive Waste Management	2006
CSA N292.5	Guideline for the exemption or clearance from regulatory control of materials that contain, or potentially contain, nuclear substances	2011 (R2016)

Licence Condition 13.2: Preliminary Decommissioning Plan

The licensee shall maintain a preliminary decommissioning plan and cost estimate.

Preamble:

This LC requires that the licensee maintain a preliminary decommissioning plan (PDP).

A PDP provides an overview of the proposed decommissioning approach that is sufficiently detailed to assure that the proposed approach is, in the light of existing knowledge, technically and financially feasible, and appropriate in the interests of health, safety, security and the protection of the environment. The PDP defines areas to be decommissioned and the general structure and sequence of the principle work packages. The PDP forms the basis for establishing and maintaining a financial arrangement (financial guarantee) that will assure adequate funding of the decommissioning plan.

It is expected that the PDP will be revised as the conditions at the facility change. When the PDP is revised, the cost of decommissioning must be reviewed. At a minimum, the PDP must be reassessed every five years.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	PN
61-508310-PDP-001	Gentilly-1 Waste Management Facility Preliminary Decommissioning Plan	4618697	PN
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	441622	PN
900-508300-PDD-001	Decommissioning and Demolition	5198760	NT
900-508300-PRD-001	Decommissioning and Demolition	5198763	PN
900-508300-GDI-001	Decommissioning and Demolition	5198758	NT

The PDP shall be kept current to reflect any changes in the site or nuclear facility. The PDP shall be revised at a minimum every five years or when required by the Commission.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-219	Decommissioning Planning for Licensed Activities	2000
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – SECURITY

Licence Condition 14.1: Security Program

The licensee shall implement and maintain a security program.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The *Nuclear Security Regulations* (NSR) require that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508710-PDD-001	Security	5198826	NT
900-508710-PRD-001	Security	5198837	PN
900-508710-GDI-001	Security	5198818	NT
900-511400-PDD-001	Cyber Security		NT
900-511400-PRD-001	Cyber Security		PN
900-511400-GDI-001	Cyber Security		NT
61-00060-021-000	Hydro Quebec for Security Guard Services	4760663	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
CNSC	Criteria for Physical Protection Systems and Devices at High-Security Sites	RD-321
CNSC	Nuclear Security Officer Medical, Physical, and Psychological Fitness	RD-363
CNSC	Security of Nuclear Substances – Sealed Sources	REGDOC-2.12.3
CNSC	Site Access Security Clearance	REGDOC-2.12.2

Licence Condition 14.2: Security Arrangements for Decommissioning

The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that would result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The NSR requires that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

The NSR requires that a licensee of a high-security site:

- maintain at all times a qualified onsite nuclear response force;
- obtain the applicable certifications, before issuing an authorization to a nuclear security officer;
- prevent and detect unauthorized entry into a protected area or inner area; and
- prevent unauthorized entry of weapons and explosive substances into a protected area or inner area.

Compliance Verification Criteria:

The licensee shall submit the proposed security arrangements and measures for any modifications to the protected area that may be associated with the dismantlement activities.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-274	Security Programs for Category I or II Nuclear Material or Certain Nuclear Facilities	2003

SCA – SAFEGUARDS AND NON-PROLIFERATION

Licence Condition 15.1: Safeguards Program

The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

Preamble:

The GNSCR requires the licensee to take all necessary measures to facilitate Canada’s compliance with any applicable safeguards agreement.

The C1NFR requires that a licence application contain information on the licensee’s proposed measures to facilitate Canada’s compliance with any applicable safeguards agreement.

Canada has entered into a safeguards agreement with the IAEA pursuant to its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. The objective of the Canada/IAEA Safeguards Agreement is for the IAEA to provide assurance on an annual basis to Canada and to the international community that all declared nuclear materials are in peaceful, non-explosive uses and that there is no indication of undeclared nuclear materials or activities. This conclusion confirms that Canada is in compliance with its obligations under the following Canada/IAEA Safeguards Agreement:

- *Treaty on the Non-Proliferation of Nuclear Weapons;*
- *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons;* and
- *Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons.*

These are reproduced in information circulars INFCIRC/140, INFCIRC/164, and INFCIRC/164/Add. 1.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.13.1	Safeguards and Nuclear Material Accountancy	2018	October, 2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508510-PDD-001	Nuclear Materials and Safeguards Management	5198783	NT
900-508510-PRD-001	Nuclear Materials and Safeguards Management	5198784	PN
900-508510-GDI-001	Nuclear Materials and Safeguards Management	5198767	NT

Guidance:

None provided.

SCA – PACKAGING AND TRANSPORT

Licence Condition 16.1: Packaging and Transport Program

The licensee shall implement and maintain a packaging and transport program.

Preamble:

The C1NFR requires that a licence application contain information on the proposed procedures for transporting nuclear substances.

Every person who transports radioactive material, or requires it to be transported, shall act in accordance with the requirements of the *Transportation of Dangerous Goods Regulations (TDGR)* and the *Packaging and Transport of Nuclear Substances Regulations, 2015 (PTNSR)*.

The PTNSR and the TDGR provide specific requirements for the design of transport packages, the packaging, marking and labeling of packages and the handling and transport of nuclear substances.

Compliance Verification Criteria:

The licensee shall implement and maintain a packaging and transport program that will ensure compliance with the requirements of the TDGR and the PTNSR.

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508520-PDD-001	Transportation of Dangerous Goods	5198788	NT
900-508520-PRD-001	Transportation of Dangerous Goods	5198791	PN
900-508520-GDI-001	Transportation of Dangerous Goods	5198787	NT

Guidance:

None provided.

APPENDIX A: DEFINITIONS AND ACRONYMS

1. DEFINITIONS

Terms and expressions used in the LCH are consistent with the definitions provided in the NSCA, the regulations made pursuant to the NSCA, or in the CNSC regulatory document REGDOC-3.6 *Glossary of CNSC Terminology*.

2. ACRONYMS LIST

Acronym	Definition
AECL	Atomic Energy of Canada Limited
AL	Action Level
ALARA	As Low As Reasonably Achievable
CINFR	<i>The Class I Nuclear Facilities Regulations</i>
CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
DG	Director General
DNCFR	Directorate of Nuclear Cycle and Facilities Regulation
DSC	Dry Storage Container
EVP ROB	Executive Vice-President Regulatory Operations Branch
GNSCR	<i>The General Nuclear Safety and Control Regulations</i>
IAEA	International Atomic Energy Agency
INFCIRC	Information Circular
LC	Licence Condition
LCH	Licence Conditions Handbook
NGS	Nuclear Generating Station
NRC	National Research Council
NRCan	Natural Resources Canada
NSR	<i>The Nuclear Security Regulations</i>
NSCA	<i>Nuclear Safety and Control Act</i>
OP&P	Operating Policies and Principles
OPEX	Operating Experience
PDP	Preliminary Decommissioning Plan
RD	Regulatory Document
RP	Radiation Protection
RPR	<i>The Radiation Protection Regulations</i>
SCA	Safety and Control Area
WFDL	Waste Facility Decommissioning Licence

MCP PROPOSÉ : INSTALLATION DE GESTION DES DÉCHETS DU RÉACTEUR NUCLÉAIRE DE DÉMONSTRATION

Le Manuel des conditions de permis proposé pour l'installation de gestion des déchets du réacteur nucléaire de démonstration est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 5698691 (Word)

e-Doc 5734996 (PDF)



PDF Ref: e-Doc 5734996

Word Ref: e-Doc 5698691

File No.: 2.14

LICENCE CONDITIONS HANDBOOK

WFDL-LCH-W4-342.00/2034

PROTOTYPE WASTE FACILITIES – WASTE FACILITY DECOMMISSIONING LICENCE

NUCLEAR POWER DEMONSTRATION WASTE FACILITY

WFDL-W4-342.00/2034

Revision 0

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**Licence Conditions Handbook
(WFDL-LCH-W4-342.00/2034,
Revision 0)**

Effective: DATE, YEAR

**Prototype Waste Facilities – Waste Facility
Decommissioning Licence
Nuclear Power Demonstration Waste Facility
WFDL-W4-342.00/2034 (Effective: DATE, YEAR)**

SIGNED at OTTAWA this Xth day of MONTH, YEAR

Kavita Murthy, Director

**Canadian Nuclear Laboratories Regulatory Program Division
Directorate of Nuclear Cycle and Facilities Regulations
CANADIAN NUCLEAR SAFETY COMMISSION**

REVISION HISTORY:

Effective Date	Rev. #	e-Doc #	Description	CAF e-Doc #
			New document	

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Revision History

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INTRODUCTION

The general purpose of the Licence Conditions Handbook (LCH) is to identify and clarify the relevant parts of the licensing basis for each licence condition. This will help ensure that the licensee performs the licensed activities for the facility in accordance with the licensing basis and intent of the licence. The LCH should be read in conjunction with the licence.

The LCH typically has three parts under each licence condition: the Preamble, Compliance Verification Criteria (CVC), and Guidance. The Preamble explains, as needed, the regulatory context, background, and/or history related to the licence condition. CVC are criteria used by CNSC staff to verify and oversee compliance with the licence condition. Guidance is non-mandatory information, including direction on how to comply with the licence condition.

Current versions of the licensing basis publications, licensee documents that require notification of change, and guidance documents referenced in the LCH are tracked in the document *Licensing Documents for Prototype Waste Facilities*, which is controlled by the Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD) and is available to the licensee upon request.

Appendix A of this LCH provides definitions of terms and a list of acronyms used throughout the LCH.

Where delegation of the Commission's authority to CNSC staff has been granted by the Commission, "a person authorized by the Commission" means CNSC staff as long as the consent is within the authority that can be delegated under the Act and within the licensing basis. For this facility, the following CNSC staff have been granted this authority:

- Director, Canadian Nuclear Laboratories Regulatory Program Division (CNLRPD)
- Director General, Directorate of Nuclear Cycle and Facilities Regulation (DG DNCFR)
- Executive Vice-President, Regulatory Operations Branch (EVP ROB)

More information on the LCH is available in the CNSC document titled *How to Write a Licence Conditions Handbook* (LCH) (e-Doc 4967591).

G. GENERAL

Licence Condition 1.1: Conduct of Activities

The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.

Preamble:

The licence is issued by the Commission pursuant to section 24 of the *Nuclear Safety and Control Act* (NSCA) while the licensing basis is defined by the CNSC in CNSC Regulatory Document REGDOC 3.5.3 Regulatory Fundamentals.

The Nuclear Power Demonstration Waste Facility (NPDWF) is located in the town of Laurentian Hills (Renfrew County, Ontario) 200 km northwest of Ottawa and is situated adjacent to the west bank of the Ottawa River. The NPDWF is located about 25 km northwest of the CRL site alongside the Ottawa River.

The NPDWF site has an area of 3.85 km² (952 acres). The facility layout is captured in Figure 2-2 of the Safety Analysis Report for the Nuclear Power Demonstration Waste Facility; 64-03610-SAR-001.

Compliance Verification Criteria:

Part (i) of the Licensing Basis

Part (i) of the licensing basis refers to applicable laws and regulations. There are many federal and provincial acts and regulations, and international laws, agreements, guidelines, etc., applicable to activities performed at a licensed facility.

Part (ii) of the Licensing Basis

Part (ii) of the licensing basis refers to the conditions and the safety and control measures included in this licence and in the documents directly referenced in the licence.

The licence requires the licensee to implement and maintain certain programs. There are no documents directly referenced in the standardized licence, those documents are now referenced in the LCH.

For the purpose of licence requirement, a program may be a series of documented, coordinated activities, not necessarily a single document.

Part (iii) of the Licensing Basis

Part (iii) of the licensing basis refers to the safety and control measures described in the licence application and the documents needed to support that licence application. The safety and control measures include important aspects of that documentation such as, but not limited to:

- the facility-specific design basis and operational information documented in the most recent safety analysis and operational limits and conditions documents;
- the licensee's written commitments, including all modifications and additions to such commitments over the duration of the licence that were made in formal correspondence, and in effect for ensuring compliance with, and conduct of licensed activities within applicable CNSC requirements, including: licensee responses to CNSC enforcement actions; licensee responses to CNSC inspections; licensee responses to CNSC requests; and licensee event reports.

Part (iii) of the licensing basis also includes safety and control measures outlined in CNSC regulatory documents, CSA standards, and other standards, codes and references that are cited in the application or in the licensee's supporting documentation.

Applicable licensee documents are listed in the LCH under the heading "Licensee Documents that Require Notification of Change". Applicable CNSC regulatory documents, CSA standards and other documents are listed in the LCH under the heading "Licensing Basis Publications". The documents listed in the LCH could cite other documents that also contain safety and control measures (i.e., there may be safety and control measures in "nested" references in the application). The documents listed in the LCH and their "nested" references define the licensing basis for the programs required by this licence.

Regulatory Role of the Licensing Basis

The licensing basis is established when the Commission renders its decision regarding the licence application.

Licence condition 1.1 requires the licensee to conduct the licensed activities in accordance with the licensing basis. For activities that are not in accordance with the licensing basis, the licensee shall take action as soon as practicable to return to a state consistent with the licensing basis, taking into account the risk significance of the situation.

This licence condition is not intended to unduly inhibit the ongoing management and operation of the facility or the licensee's ability to adapt to changing circumstances and continuously improve. This licence condition does not explicitly prohibit changes (such as in management or operation) with a neutral or positive impact on safety. Changes shall be compliant with the licensing basis, shall be made according to the licensee's management system (licence condition 3.1) and shall be made in accordance with licence condition 1.4.

CNSC Staff's Approach to Assessing the Licensing Basis

For any proposed activity/facility to be carried out at the site, CNSC staff will review the information submitted by CNL to determine if the proposed activity/facility remains within the licensing basis. CNL may proceed with the proposed initiatives if they are found to be within the licensing basis.

CNSC staff assess a proposed facility/activity as being within the licensing basis based on changes or impact on the overall safety of the site.

CNSC staff will submit to the Commission for consideration any proposed activity or facility which CNSC staff consider to be outside the licensing basis. If the Commission grants approval to such an activity/facility, this activity/facility will become part of the licensing basis and reflected in updates to LCH as appropriate.

Activities Included in the Licensing Basis

Conduct of licensed activities at the site include:

- (a) decommission the NPD WF, as further described and located on the sites defined in the WFDL-W4-342.00/2034 LICENCE CONDITIONS HANDBOOK (LCH);
- (b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
- (c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b).

As per the Record of Proceedings dated July 16, 2014 (e-Doc 4471304), the Waste Facility Decommissioning Licence solely authorizes continued storage-with-surveillance activities at the site. Prior to entering active decommissioning, CNL is required to submit a detailed decommissioning plan.

Licence Application Documents and Supporting Documents

Document Number	Document Title	e-Doc
3640-ACNO-14-0004-L	Application to Replace Waste Facility Operating Licences for AECL Prototype Reactor Waste Management Facilities: Nuclear Power Demonstration (NPD), Douglas Point and Gently-1	4413446
145-ACNO-14-0021-L	AECL Transfer of Commission Licences to the Canadian Nuclear Laboratories Limited and Associated Applications for Exemption from Regulations	4483033

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-3.5.3	Regulatory Fundamentals	2018

When the licensee becomes aware that a proposed change or activity might be outside the licensing basis, it should first seek direction from CNSC staff regarding the potential acceptability of this change or activity. The licensee should take into account that certain types of proposed changes might require significant lead times before CNSC staff can make recommendations and/or the Commission can properly consider them.

Licence Condition 1.2: Inconsistencies

The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

Preamble:

None provided.

Compliance Verification Criteria:

In the event of any conflict or inconsistency between two elements of the licensing basis, the licensee shall direct the conflict or inconsistency to CNSC staff for resolution.

Guidance:

None provided.

Licence Condition 1.3: Decommissioning Policies and Programs

The licensee shall implement and maintain decommissioning policies, programs and procedures.

Preamble:

The *Class I Nuclear Facilities Regulations (C1NFR)* require that an application for a licence to decommission a Class I nuclear facility contain proposed measures, methods and procedures for carrying on the decommissioning.

This licence condition requires that the licensee implement and maintain adequate decommissioning policies, programs and procedures. These:

- define the operating rules consistent with the safety report and other licensing support documentation within which the facility will be maintained
- specify the authorities of facility staff to make decisions within the defined boundaries and,
- identify and differentiate between actions where discretion may be applied and where jurisdictional authorization is required.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009	July 25, 2014

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-1600-SWS-001	Nuclear Power Demonstration Waste Management Facility Storage with Surveillance Plan	3954000	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
64-01600-PDP	NPD Waste Management Facility Preliminary Decommissioning Plan	1260531	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

Guidance:

None provided.

Licence Condition 1.4: Changes to Polices, Programs and Procedures

The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.

Preamble:

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity and thus establishes the basis for the CNSC's compliance program in respect of that regulated facility or activity. Licensees are required to conduct the licensed activities in accordance with the licensing basis; however, as changes to the facility, or to the documents included or referenced in the licence application are to be expected during the licensing period, licensees are expected to assess changes for impact on the licensing basis. Any changes to the licensing basis require evaluation to determine impact as related to the provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

In general, it is expected that changes for which the licensee shall notify the CNSC will be captured as changes to specific licensee documents. The LCH identifies licensee documents that require written notification of changes to the CNSC. They are selected from the set of documents supporting the application and which describe the licensee's safety and control measures (part (iii) of the licensing basis). In identifying the appropriate documents for each LC, CNSC staff select licensee documents that provide reasonable assurance that adequate safety and control measures are in place to satisfy the LC. See LC 1.1 for additional discussion on the licensing basis.

Compliance Verification Criteria:

The licensee shall notify CNSC staff of changes to licensee's documents identified in the LCH. The notification shall identify if the changes are administrative in nature, or affect the licensing basis. The written notification of change shall include a copy of the revised document.

Licensee documents listed in the LCH (under each specific licence condition) are subdivided into groups having different requirements for notification of change.

- ACC CNSC staff acceptance of changes is required before proceeding with change
- PN prior notification - the licensee shall submit the notice to the CNSC prior to implementing the change; typically, the requirement is to submit the proposed changes 30 days prior to planned implementation; however, the licensee shall allow sufficient time for the CNSC to review the change proportionate to its complexity and the importance of the safety and control measures being affected
- NT notification at time of making the change

Changes that may affect the licensing basis, including any change that is not captured as a change to a document listed in the LCH (e.g., construction of new facilities/buildings, or transitioning any facility/building from one phase of its life cycle to another), requires written notification to the CNSC to verify they are in accordance with the licensing basis.

For any change that is outside the licensing basis, the licensee shall obtain Commission approval before proceeding with the change.

Guidance:

None provided.

Licence Condition 1.5: Contractors

The licensee shall ensure that every contractor working at the facility complies with this licence.

Preamble:

The *General Nuclear Safety and Control Regulations* (GNSCR) defines the obligations of the licensee. As part of the licensee's operations, contractors may be employed for activities within the boundaries of the licensed facility. Through the implementation of 'construction islands', the contractor has authority within the area to manage its own activities. However, this does not relieve the licensee of its obligations under the NSCA and the licence that was issued.

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Compliance Verification Criteria:

The management of contractors will be evaluated against the following elements and principles:

- The risks to contractors and risks to the organization from the use of contractors are evaluated to identify, assess, and eliminate or control hazards;
- Contractors are adequately trained in up-to-date procedures and are qualified and competent (i.e., knowledge, skills, and abilities) to conduct work within the licensed facility;
- Work carried out by the contractor is approved by competent members of the licensee's staff and monitored by qualified personnel.

Guidance:

None provided.

Licence Condition 1.6: Licensee Commitments

The licensee shall comply with all licensee commitments as defined in the WFDL-W4-342.00/2034 LCH.

Preamble

The commitments referred to in LC 1.6 are all met.

Guidance

None provided.

Licence Condition 1.7: Public Information and Disclosure Program

The licensee shall implement and maintain a public information program and disclosure program.

Preamble:

The C1NFR requires that an application for a licence shall contain the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed.

The primary goal of the public information program, as it relates to the licensed activities, is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. As a component, where the public has indicated an interest to know, the program shall include a commitment to and protocol for ongoing, timely communication of information related to the licensed facility during the course of the licence period.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
RD/GD-99.3	Public Information and Disclosure	2012	July 25, 2014

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-513430-REPT-001	Public Information Program for Canadian Nuclear Laboratories (CNL)	5252468	NT

Guidance:

None provided.

DECOMMISSIONING

Licence Condition 2.1: Decommissioning Plans

The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.

Preamble:

The C1NFR requires that a licence application contain the proposed plan for decommissioning of the nuclear facility or of the site.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	2014
G-219	Decommissioning planning for licensed activities	2000	2014

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
CW-508300-OV-146	Decommissioning Process Overview	4257057	ACC
900-508300-PDD-001	Decommissioning and Demolition	5198760	PN
900-508300-PRD-001	Decommissioning and Demolition	5198763	ACC
900-508300-GDI-001	Decommissioning and Demolition	5198758	PN

The licensing basis for the NPD WF only authorizes CNL to conduct activities related to the “Storage-with-Surveillance” phase.

Release from Regulatory Control

The licensee shall only release the decommissioned property, or any part thereof, for reuse upon acceptance of the final end-state report by the CNSC.

Guidance:

None provided.

Licence Condition 2.2: Financial Guarantee

The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application include any proposed financial guarantee relating to the activity to be licensed.

The financial guarantee for decommission a nuclear facility consists of one or more financial guarantee instruments which are based on the decommissioning strategy described in the comprehensive preliminary decommissioning plan and the associated cost estimate.

Atomic Energy of Canada Limited (AECL) is a Schedule III, Part 1 Crown Corporation under the *Financial Administration Act* and an agent of Her Majesty in Right of Canada. As an agent of Her Majesty in Right of Canada, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada. While the restructuring of AECL has seen the ownership of Canadian Nuclear Laboratories Limited (CNL) transferred to a private-sector contractor, the Canadian National Energy Alliance (CNEA), AECL retains ownership of the lands, assets and liabilities associated with CNL's licences. These liabilities have been officially recognized by the Minister of Natural Resources in a letter dated July 31, 2015 (e-Doc 4815508).

Compliance Verification Criteria:

The financial guarantee for decommissioning shall be reviewed and revised by the licensee every 5 years, when requested by the CNSC, or following a revision to the cost estimate for decommissioning or changes to the decommissioning strategy which significantly impacts the financial guarantee. The next revision of the financial guarantee is due by July 31, 2020.

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
145-NRCANNO-15-0.001	Relating to Provision of Financial Guarantees for AECL Sites	4815508	N/A

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – MANAGEMENT SYSTEM

Licence Condition 3.1: Management System

The licensee shall implement and maintain a management system.

Preamble:

The CINFR requires that an application for a licence shall contain the proposed management system for the activity to be licensed, including measures to foster a healthy safety culture.

Safe and reliable operation of nuclear facilities requires a commitment and adherence to a set of management system principles and, consistent with those principles, the implementation of planned and systematic processes that achieve expected results. The management system focuses on safety in all business activities.

The management system is in place to satisfy the requirements set out in the NSCA, regulations made pursuant to the NSCA, the licence and the measures necessary to ensure that safety is of paramount consideration in the implementation of the management system. The management system promotes and supports a healthy safety culture by integrating the characteristics of a healthy safety culture:

- Safety is a clearly recognized value;
- Accountability for safety is clear;
- Safety is integrated into all activities;
- A safety leadership process exists; and
- Safety culture is learning driven

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N286	Management system requirements for nuclear facilities	2012	

Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514100-MAN-001	Management System	5185520	ACC
900-514200-MAN-001	Quality Assurance	5185528	ACC
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	ACC
900-514300-LST-001	Site Licences, Certificates, Permits and Representatives	5185538	NT
900-513000-LST-001	Codes, Regulations, Standards, and other Documents	5185489	NT

Guidance:

The licensee should conduct self-assessments of safety culture periodically. The assessment method should be documented and the framework should include links to the safety culture characteristics: safety is a clearly recognized value, leadership is clear, accountability is clear, safety is integrated into all activities, safety is learning-driven and the work environment is safety conscious.

Guidance Documents

Document Number	Document Title	Version
REGDOC 2.1.2	Safety Culture	2018
CSA N286.0.1	Commentary on N286-12, Management system requirements for nuclear facilities	2014

SCA – HUMAN PERFORMANCE MANAGEMENT

Licence Condition 4.1: Human Performance Program

The licensee shall implement and maintain a human performance program.

Preamble:

The GNSCR requires the licensee to: ensure the presence of a sufficient number of qualified workers; train the workers; and to ensure the workers' follow procedures and safe work practices.

The C1NFR requires that an application for a licence shall contain the proposed human performance program for the activity to be licensed, including measures to ensure workers fitness for duty.

Human performance relates to reducing the likelihood of human error in work activities. It refers to the outcome of human behaviours, functions and actions in a specified environment, reflecting the ability of workers and management to meet the management system's defined performance under the conditions in which the management system will be employed.

Human factors are factors that influence human performance as it relates to the safety of a nuclear facility or activity over all the phases, including design, operation, maintenance, and decommissioning. These factors may include the characteristics of the person, task, equipment, organization, environment, and training. The application of human factors to issues such as interface design, training, procedures, organization and job design may affect the reliability of humans performing tasks under various conditions.

The human performance program addresses and integrates the range of human factors that influence human performance, including but not limited to:

- The provision of qualified workers;
- The reduction of human error;
- Ensure fitness for duty;
- Organizational support for safe work activities;
- The continuous improvement of human performance; and
- Monitoring hours of work.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-514000-PDD-001	Performance Assurance	5185502	NT
900-514000-PRD-001	Performance Assurance	5185508	PN
900-514000-GDI-001	Performance Assurance	5185497	NT

Guidance:

The licensee should continuously monitor human performance, take steps to identify human performance weaknesses, improve human performance and reduce the likelihood of nuclear safety events with human performance-related causes and root causes.

Licence Condition 4.2: Training Program

The licensee shall implement and maintain a training program.

Preamble:

As defined by the GNSCR, a worker is a person who performs work that is referred to in a licence. This includes contractors and temporary employees. Training requirements apply equally to these types of workers as to the licensee's own employees.

The GNSCR requires that licensees ensure that there are a sufficient number of properly trained and qualified workers to safely conduct the licensed activities.

The C1NFR require that applicants for a Class I facility licence describe the training programs which have been implemented, and that licence applications include the proposed responsibilities, qualification requirements, training program and requalification program for workers, along with the results that have been achieved in implementing the program for recruiting, training and qualifying workers.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.2.2	Personnel Training, version 2	2016	April 1, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510200-PDD-001	Training and Development	5185461	NT
900-510200-PRD-001	Training and Development	5185465	PN
900-510200-GDI-001	Training and Development	5262060	NT

The licensee shall ensure that all workers are qualified to perform the duties and tasks required of their position.

All training programs related to workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and licensed activities, are evaluated against the criteria for a systematic approach to training (SAT).

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Guidance:

None provided.

SCA – OPERATING PERFORMANCE

Licence Condition 5.1: Operational Reporting

The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

Preamble:

This requirement provides information to the CNSC on the results of its operations, its decommissioning activities, the results of the monitoring programs, any changes made to procedures, equipment, or structures, and a summary of any reports made pursuant to sections 29 and 30 of the GNSCR.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-3.1.2	Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills	2018	April 1, 2018

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
CW-508760-PRO-001	Canadian Nuclear Laboratories Reporting of Unplanned Events and Situations to the Canadian Nuclear Safety Commission	5037780	NT

Guidance:

None provided.

SCA – SAFETY ANALYSIS

Licence Condition 6.1: Safety Analysis Program

The licensee shall maintain a safety report for the facility.

Preamble:

The GNSCR requires that a licence application contain a description and the results of any analyses performed.

The C1NFR requires, amongst other requirements, that a licence application contain a final safety analysis report, and additional supporting information.

The licensee holds the responsibility for ensuring that the safety analysis is accurate and meets the regulatory requirements.

Compliance Verification Criteria:

Licensee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-03610-SAR-003	Safety Analysis Report for the Nuclear Power Demonstration Waste Management Facility	5068913	ACC
900-508770-PDD-001	Safety Analysis	5292639	PN
900-508770-PRD-001	Safety Analysis	5292644	ACC
900-508770-GDI-001	Safety Analysis	5292635	PN

Licence Conditions: SCA – Fitness for Service

Every 5 years, the licensee shall review and revise, if necessary, the safety analysis report for the facility to confirm that the document accurately captures the condition of the facility and that the radiological consequences of accident scenarios do not exceed public dose limits. The safety analysis report review shall be submitted to CNSC staff.

Guidance:

Guidance Documents

Document Number	Document Title	Version
IAEA GSR Part 4, Rev. 1	Safety Assessment for Facilities and Activities	2016

SCA – PHYSICAL DESIGN

Licence Condition 7.1: Change to Design or Equipment

The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

Preamble:

The C1NFR requires that a licence application contain a description of the structures, systems and components, and relevant documentation of the facility design.

A design program ensures that the facility design is managed using a well-defined systematic approach.

Implementing and maintaining a design program confirms that safety-related SSCs and any modifications to them continue to meet their design bases given new information arising over time and taking changes in the external environment into account. It also confirms that SSCs continue to be able to perform their safety functions under all facility states. An important cross-cutting element of a design program is design basis management.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire Protection for Facilities that Process Handle, or Store Nuclear Substances	2013	July 25, 2014
	<i>National Building Code of Canada</i>	2015	2018

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-01631-041-001	NPD Description of static state	1996 July	ACC

Licence Conditions: SCA – Fitness for Service

Guidance:

None provided.

SCA – FITNESS FOR SERVICE

Licence Condition 8.1: Fitness for Service Program

The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

Preamble:

The C1NFR requires that a licence application contain the proposed measures, policies, methods and procedures to maintain the nuclear facility.

The objective of an aging management plan is to ensure that the condition of critical systems, structures and components related to the safe decommissioning of the facility are understood and that activities have been put in place to assure their safe continued operation as they age. This is accomplished by establishing an integrated set of programs and activities that ensure that performance requirements for all critical systems, structures and components are met on an ongoing basis.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-1600-SWS-001	Nuclear Power Demonstration Waste Management Facility Storage with Surveillance Plan	3954000	ACC
64-20000-680-001	Life Management Plan for NPD Structures	4002706	ACC
900-508230-PDD-001	Maintenance and Work Management	5198754	NT
900-508230-PRD-001	Maintenance and Work Management	5198756	PN
900-508230-GDI-001	Maintenance and Work Management	5198735	NT

Guidance:

Guidance Documents

Document Number	Document Title	Version
REGDOC-2.6.3	Aging Management	2014

SCA – RADIATION PROTECTION

Licence Condition 9.1: Radiation Protection

The licensee shall implement and maintain a radiation protection program.

Preamble:

The *Radiation Protection Regulations* (RPR) requires that the licensee implement a radiation protection program and also ascertain and record doses for each person who performs any duties in connection with any activity that is authorized by the NSCA or is present at a place where that activity is carried out. This program must ensure that doses to persons do not exceed prescribed dose limits and are kept as low as reasonably achievable (ALARA), social and economic factors being taken into account. Also, the program ensures that occupational exposures are ascertained and recorded in accordance with the RPR through the establishment of dosimetry requirements.

The regulatory dose limits to workers and the public are explicitly provided in the RPR.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5222516	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5222521	ACC
900-508740-GDI-001	Radiation Protection Program Governing Documents Index	5222489	PN
900-508740-STD-005	Design and Modification Considerations	5673836	

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004

Licence Condition 9.2: Radiation Protection Action Level Reporting

The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

Preamble:

The regulatory dose limits to workers and the public are explicitly provided in the RPR. The RPR also specifies the requirements related to action levels (ALs) and indicate that the licence will be used to identify their notification timeframes. ALs relate to the parameters of dose to workers.

ALs are designed to alert licensees before regulatory dose limits are reached. By definition, if an AL is reached, a loss of control of some part of the associated radiation protection program may have occurred, and specific action is required, as defined in the RPR and the licence. ALs are not intended to be static and are to reflect operating conditions at the NPD site.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508740-PDD-001	Radiation Protection Program Description Document	5507946	PN
900-508740-PRD-001	Radiation Protection Program Requirements Document	5507946	ACC
900-508740-MCP-006	Action Levels for Internal and External Exposure	5371298	PN
900-508740-MCP-007	Dose Control Points	5371298	PN
900-508740-MCP-026	ALARA Review and Assessment – Planning and Control of Radiation Work	5371298	PN
CW-508740-REQ-112	Contamination Limits	3914857	PN

The current Action Levels are given in the following table:

Application	Action Level	Observations
<u>Dose to workers</u> Individual worker external radiation dose received during four week period	6 mSv (600 mrem)	The action Level is exceeded if a person receives an external radiation dose of greater than 6 mSv during a four week period.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-129, Rev. 1	Keeping Radiation Exposures and Doses “As Low as Reasonably Achievable (ALARA)”	2004
G-228	Developing and Using Action Levels	2001

The licensee should conduct a documented review and, if necessary, revise the ALs at least once every five years in order to validate their effectiveness. The results of such reviews should be provided to CNSC staff.

SCA – CONVENTIONAL HEALTH AND SAFETY

Licence Condition 10.1: Conventional Health and Safety Program

The licensee shall implement and maintain a conventional health and safety program.

Preamble:

The C1NFR requires that a licence application contain the proposed worker health and safety policies and procedures.

Federally regulated sites are also subject to the requirements of *Canada Labour Code* and *Canada Occupational Health and Safety Regulations*.

Compliance Verification Criteria:

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-510400-PDD-001	Occupational Safety and Health	5185473	NT
900-510400-PRD-001	Occupational Safety and Health	5242679	PN
900-510400-GDI-001	Occupational Safety and Health	5185470	NT

Guidance:

None provided.

SCA – ENVIRONMENTAL PROTECTION

Licence Condition 11.1: Environmental Protection Program

The licensee shall implement and maintain an environmental protection program.

Preamble:

The C1NFR requires that a licence application contain information related to environmental protection. The GNSCR requires every licensee to take all reasonable precautions to protect the environment. The RPR prescribes the radiation dose limits for the general public of 1 mSv per calendar year.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.9.1	Environmental Protection: Environmental Principles, Assessments and Protection Measures, version 1.1	2017	April 1, 2019
N288.4	Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills	2010 (R2015)	April 1, 2019
N288.5	Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills	2011 (R2016)	2016
N288.6	Environmental risk assessment at Class I nuclear facilities and uranium mines and mills	2012 (R2017)	April 1, 2019
N288.7	Groundwater protection programs at Class I nuclear facilities and uranium mines and mills	2015	April 1, 2020
N288.8	Establishing and implementing action levels to control releases to the environment from nuclear facilities	2017	April 1, 2020

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-96000-NSN-002	Derived Release Limits for AECL's NPD site	5416396	ACC
64-509200-PLA-001	Effluent Monitoring Program	4994826	ACC
900-509200-PDD-001	Environmental Protection	5198856	PN
900-509200-PRD-001	Environmental Protection	5198861	ACC
900-509200-GDI-001	Environmental Protection	5198853	PN

Guidance:

Guidance Documents

Document Number	Document Title	Version
CSA N288.1	Guidelines for calculating derived release limits for radioactive material in airborne and liquid effluents for normal operation of nuclear facilities	2014 (Update 1)

SCA – EMERGENCY MANAGEMENT AND FIRE PROTECTION

Licence Condition 12.1: Emergency Preparedness Program

The licensee shall implement and maintain an emergency preparedness and response program.

Preamble:

The C1NFR requires measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including measures to assist, notify, report to offsite authorities including the testing of the implementation of these measures.

This licence condition requires the licensee to establish an emergency preparedness program to prepare for, to respond to, and to recover from the effects of accidental radiological/nuclear and/or hazardous substance release. As part of the emergency preparedness program, the licensee establishes an onsite emergency response plan and an emergency response organization and makes arrangements for coordinating offsite activities and cooperating with external response organizations throughout all phases of an emergency.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.10.1	Nuclear Emergency Preparedness and Response, Version 2	2016	April 1, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-508720-021-00	MoU with Laurentian Hills for the Provision of Fire emergency Response services	NA	PN
900-508730-GDI-001	Emergency Preparedness	5185448	PN
900-508730-PRD-001	Emergency Preparedness	5185458	ACC
900-508730-PDD-001	Emergency Preparedness	5185454	PN

Guidance:

None provided.

Licence Condition 12.2: Fire Protection Program

The licensee shall implement and maintain a fire protection program.

Preamble:

Licensees require a comprehensive fire protection program (the set of planned, coordinated, controlled and documented activities) to ensure the licensed activities do not result in unreasonable risk to the health and safety of persons and to the environment due to fire and to ensure that the licensee is able to efficiently and effectively respond to emergency fire situations.

Fire protection provisions, including response, are required for the design, construction, commissioning, operation, and decommissioning of nuclear facilities, including structures, systems, and components (SSCs) that directly support the plant and the protected area.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N393	Fire protection for facilities that process, handle, or store nuclear substances	2013 (R2016)	Dec 31, 2022
	<i>National Fire Code of Canada</i>	2015	April 1, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
64-508720-FHA-001	Fire Hazard Analysis	4002706	ACC
64-508720-PRO-001	Fire Protection at NPD		ACC
900-508720-PRD-001	Fire Protection	5198849	ACC
900-508720-PDD-001	Fire Protection	5198844	NT
900-508720-GDI-001	Fire Protection	5198843	NT

Guidance:

Where CSA N393 does not address a fire protection topic or issue in whole, or where additional guidance is beneficial, the standards and recommended practices set out by the NFPA are used as guidance by CNSC staff in determining the adequacy of a fire protection measure.

SCA – WASTE MANAGEMENT

Licence Condition 13.1: Waste Management Program

The licensee shall implement and maintain a waste management program.

Preamble:

The “waste management” safety and control area covers internal waste-related programs that form part of the facility’s operations up to the point where the waste is removed from the facility to a separate waste management facility. Topics include waste management, waste characterization, waste minimization and waste management practices.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N292.0	General principles for the management of radioactive waste and irradiated fuel	2014	April 1, 2018
CSA N292.3	Management of low- and intermediate-level radioactive waste	2014	April 1, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508600-GDI-001	Waste Management	5198807	NT
900-508600-PDD-001	Waste Management	5198811	NT
900-508600-PRD-001	Waste Management	5262060	ACC
CW-508600-PLA-002	CNL Integrated Waste Strategy	5198866	ACC

CNL shall characterize its waste streams and minimize the production of all wastes taking into consideration the health and safety of workers and the environment, integrate waste management programs as a key element of the facility’s safety culture, and regularly audit its program to maximize its efficiency.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-320	Assessing the Long term Safety of Radioactive Waste Management	2006
CSA N292.5	Guideline for the exemption or clearance from regulatory control of materials that contain, or potentially contain, nuclear substances	2011 (R2016)

Licence Condition 13.2: Preliminary Decommissioning Plan

The licensee shall maintain a preliminary decommissioning plan and cost estimate.

Preamble:

This LC requires that the licensee maintain a preliminary decommissioning plan (PDP).

A PDP provides an overview of the proposed decommissioning approach that is sufficiently detailed to assure that the proposed approach is, in the light of existing knowledge, technically and financially feasible, and appropriate in the interests of health, safety, security and the protection of the environment. The PDP defines areas to be decommissioned and the general structure and sequence of the principle work packages. The PDP forms the basis for establishing and maintaining a financial arrangement (financial guarantee) that will assure adequate funding of the decommissioning plan.

It is expected that the PDP will be revised as the conditions at the facility change. When the PDP is revised, the cost of decommissioning must be reviewed. At a minimum, the PDP must be reassessed every five years.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
CSA N294	Decommissioning of facilities containing nuclear substances	2009 (R2014)	

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	PN
64-01600-PDP	NPD Waste Management Facility Preliminary Decommissioning Plan	1260531	PN
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	441622	PN
900-508300-PDD-001	Decommissioning and Demolition	5198760	NT
900-508300-PRD-001	Decommissioning and Demolition	5198763	PN
900-508300-GDI-001	Decommissioning and Demolition	5198758	NT

The PDP shall be kept current to reflect any changes in the site or nuclear facility. The PDP shall be revised at a minimum every five years or when required by the Commission.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-219	Decommissioning Planning for Licensed Activities	2000
G-206	Financial Guarantee for the Decommissioning of Licensed Activities	2000

SCA – SECURITY

Licence Condition 14.1: Security Program

The licensee shall implement and maintain a security program.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The *Nuclear Security Regulations* (NSR) require that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

Compliance Verification Criteria:

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508710-PDD-001	Security	5198826	NT
900-508710-PRD-001	Security	5198837	PN
900-508710-GDI-001	Security	5198818	NT
900-511400-PDD-001	Cyber Security		NT
900-511400-PRD-001	Cyber Security		PN
900-511400-GDI-001	Cyber Security		NT

The decommissioning licence authorizes the Storage-with-Surveillance activity at the site. NPDWF is not a high-security site. The licensee shall implement a security program commensurate with the risk presented by the facility to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

Guidance:

None provided.

Licence Condition 14.2: Security Arrangements for Decommissioning

The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that would result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

Preamble:

The GNSCR requires that a licence application contain information related to site access control and measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

The C1NFR requires that a licence application contain the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility.

The NSR require that a licence application contain specific information related to nuclear security, stipulates the requirements for high-security sites, and contains specific requirements pertaining to the transportation of Category I, II or III nuclear material.

The NSR require that a licensee of a high-security site:

- maintain at all times a qualified onsite nuclear response force;
- obtain the applicable certifications, before issuing an authorization to a nuclear security officer;
- prevent and detect unauthorized entry into a protected area or inner area; and
- prevent unauthorized entry of weapons and explosive substances into a protected area or inner area.

Compliance Verification Criteria:

The licensee shall submit the proposed security arrangements and measures for any modifications to the protected area that may be associated with the dismantlement activities.

The decommissioning licence authorizes the Storage-with-Surveillance activity at the NPD site. NPDWF is not a high-security site. The licensee shall implement a security program commensurate with the risk presented by the facility to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

Guidance:

Guidance Documents

Document Number	Document Title	Version
G-274	Security Programs for Category I or II Nuclear Material or Certain Nuclear Facilities	2003

SCA – SAFEGUARDS AND NON-PROLIFERATION

Licence Condition 15.1: Safeguards Program

The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

Preamble:

The GNSCR requires the licensee to take all necessary measures to facilitate Canada’s compliance with any applicable safeguards agreement.

The CINFR requires that a licence application contain information on the licensee’s proposed measures to facilitate Canada’s compliance with any applicable safeguards agreement.

Canada has entered into a safeguards agreement with the IAEA pursuant to its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. The objective of the Canada/IAEA Safeguards Agreement is for the IAEA to provide assurance on an annual basis to Canada and to the international community that all declared nuclear materials are in peaceful, non-explosive uses and that there is no indication of undeclared nuclear materials or activities. This conclusion confirms that Canada is in compliance with its obligations under the following Canada/IAEA Safeguards Agreement:

- *Treaty on the Non-Proliferation of Nuclear Weapons;*
- *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons;* and
- *Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons.*

These are reproduced in information circulars INFCIRC/140, INFCIRC/164, and INFCIRC/164/Add. 1.

Compliance Verification Criteria:

Licensing Basis Publications

Document Number	Document Title	Version	Effective Date
REGDOC-2.13.1	Safeguards and Nuclear Material Accountancy	2018	October, 2018

Licencee Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508510-GDI-001	Nuclear Materials and Safeguards Management	5198767	NT
900-508510-PDD-001	Nuclear Materials and Safeguards Management	5198783	NT
900-508510-PRD-001	Nuclear Materials and Safeguards Management	5198784	PN

Guidance:

None provided.

SCA – PACKAGING AND TRANSPORT

Licence Condition 16.1: Packaging and Transport Program

The licensee shall implement and maintain a packaging and transport program.

Preamble:

The C1NFR requires that a licence application contain information on the proposed procedures for transporting nuclear substances.

Every person who transports radioactive material, or requires it to be transported, shall act in accordance with the requirements of the *Transportation of Dangerous Goods Regulations (TDGR)* and the *Packaging and Transport of Nuclear Substances Regulations, 2015 (PTNSR)*.

The PTNSR and the TDGR provide specific requirements for the design of transport packages, the packaging, marking and labeling of packages and the handling and transport of nuclear substances.

Compliance Verification Criteria:

The licensee shall implement and maintain a packaging and transport program that will ensure compliance with the requirements of the TDGR and the PTNSR.

Licence Documents that Require Notification of Change

Document Number	Document Title	e-Doc	Notification
900-508520-PDD-001	Transportation of Dangerous Goods	5198788	NT
900-508520-PRD-001	Transportation of Dangerous Goods	5198791	PN
900-508520-GDI-001	Transportation of Dangerous Goods	5198787	NT

Guidance:

None provided.

APPENDIX A: DEFINITIONS AND ACRONYMS

1. DEFINITIONS

Terms and expressions used in the LCH are consistent with the definitions provided in the NSCA, the regulations made pursuant to the NSCA, or in the CNSC regulatory document REGDOC-3.6 *Glossary of CNSC Terminology*.

2. ACRONYMS LIST

Acronym	Definition
AECL	Atomic Energy of Canada Limited
AL	Action Level
ALARA	As Low As Reasonably Achievable
CINFR	<i>The Class I Nuclear Facilities Regulations</i>
CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
DG	Director General
DNCFR	Directorate of Nuclear Cycle and Facilities Regulation
DSC	Dry Storage Container
EVP ROB	Executive Vice-President Regulatory Operations Branch
GNSCR	<i>The General Nuclear Safety and Control Regulations</i>
IAEA	International Atomic Energy Agency
INFCIRC	Information Circular
LC	Licence Condition
LCH	Licence Conditions Handbook
NGS	Nuclear Generating Station
NRC	National Research Council
NRCan	Natural Resources Canada
NSR	<i>The Nuclear Security Regulations</i>
NSCA	<i>Nuclear Safety and Control Act</i>
OP&P	Operating Policies and Principles
OPEX	Operating Experience
PDP	Preliminary Decommissioning Plan
RD	Regulatory Document
RP	Radiation Protection
RPR	<i>The Radiation Protection Regulations</i>
SCA	Safety and Control Area
WFDL	Waste Facility Decommissioning Licence

PERMIS ACTUEL : INSTALLATIONS PROTOTYPES DE GESTION DES DÉCHETS

Le permis actuel est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 4490567 (Word)

e-Doc 4541221 (PDF)



TRANSFER

WASTE FACILITY DECOMMISSIONING LICENCE

PROTOTYPE WASTE FACILITIES

Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and its associated Regulations.

I) LICENCE NUMBER: WFDL-W4-332.00/2034

II) LICENSEE: This licence is issued to:

Atomic Energy of Canada Limited–
Énergie atomique du Canada limitée
Chalk River, Ontario
K0J 1J0

III) TRANSFER:

Pursuant to subsection 37 of the *Nuclear Safety and Control Act*, this licence is hereby transferred as follows:

Section II of the licence is modified as follows:

Canadian Nuclear Laboratories Limited
Laboratoires nucléaires canadiens limitée
1 Plant Road
Chalk River, Ontario
K0J 1J0

Section III of the licence is modified as follows:

The effective date of the license will take effect upon receipt of written confirmation, from both Atomic Energy of Canada Limited and Canadian Nuclear Laboratories Limited that all steps of the reorganization are complete.

IV) TRANSFER REQUESTED:

1. AECL. July 29, 2014. Correspondence from R.S. Walker, AECL to M. Leblanc, CNSC. Atomic Energy of Canada Limited transfer of Designated Officer Licences to the Canadian Nuclear Laboratories Limited. AECL Document Number 145-ACNO-14-0022-L. e-Doc 4494654.

V) DATE OF TRANSFER:

The Commission at a hearing, made the decision for the transfer on November 2014. The effective date of the license will take effect upon receipt of written confirmation, from both Atomic Energy of Canada Limited and Canadian Nuclear Laboratories Limited that all steps of the reorganization are complete.

The foregoing transfer is consolidated in the revised licence, WASTE FACILITY DECOMMISSIONING LICENCE, No. WFDL-W4-332.01/2034, attached hereto as Schedule 1.

SIGNED at OTTAWA this 22nd day of October, 2014



Michael Binder, President
On behalf of the Canadian Nuclear Safety Commission



Schedule 1

PDF Ref: e-Doc 4541221
Word Ref: e-Doc 4490567
File: 2.05

WASTE FACILITY DECOMMISSIONING LICENCE

PROTOTYPE WASTE FACILITIES

- I) LICENCE NUMBER:** WFDL-W4-332.01/2034
- II) LICENSEE:** Pursuant to section 24 of the *Nuclear Safety and Control Act* this licence is issued to:
- Canadian Nuclear Laboratories Limited**
Laboratoires nucléaires canadiens limitée
1 Plant Road
Chalk River, Ontario
K0J 1J0
- III) LICENCE PERIOD:** This licence is valid from **July 16, 2014** to **December 31, 2034**, unless suspended, amended, revoked or replaced.
- The effective date of the license will take effect upon receipt of written confirmation, from both Atomic Energy of Canada Limited and Canadian Nuclear Laboratories Limited that all steps of the reorganization are complete
- IV) LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- decommission the Douglas Point WF, Gentilly-1 WF, and NPD WF, as further described and located on the sites defined in the WFDL-W4-332.00/2034 LICENCE CONDITIONS HANDBOOK (LCH).
 - possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
 - possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b)

EXPLANATORY NOTES:

- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.
- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.
- (iii) The WFDL-W4-332.00/2034 Licence Conditions Handbook (LCH) identifies the criteria that will be used by Canadian Nuclear Safety Commission (CNSC) staff to assess the licensee's compliance with the conditions listed in the licence. The LCH also provides information regarding delegation of authority and applicable version control of documents.

VI) CONDITIONS:

1 GENERAL

- 1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.
- 1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.
- 1.3 The licensee shall implement and maintain decommissioning policies, programs and procedures.
- 1.4 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.
- 1.5 The licensee shall ensure that every contractor working at the facility complies with this licence.
- 1.6 The licensee shall comply with all commitments defined in the WFDL-W4-332.00/2034 LCH.

- 1.7 The licensee shall implement and maintain a public information program and disclosure program.

2 DECOMMISSIONING

- 2.1 The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.
- 2.2 The licensee shall provide a financial guarantee that remains valid, in effect and adequate to fund the future decommissioning of the facility as described in condition 13.2 of this licence that shall be reviewed and updated every 5 years, or when requested by the Commission or a person authorized by the Commission.

3 MANAGEMENT SYSTEM

- 3.1 The licensee shall implement and maintain a management system.

4 HUMAN PERFORMANCE MANAGEMENT

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

5 OPERATING PERFORMANCE

- 5.1 The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

6 SAFETY ANALYSIS

- 6.1 The licensee shall maintain a safety report for the facility.

7 PHYSICAL DESIGN

- 7.1 The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

8 FITNESS FOR SERVICE

- 8.1 The licensee shall implement and maintain an aging management plan for the maintenance of systems, components and structures for the facility.

9 RADIATION PROTECTION

- 9.1 The licensee shall implement and maintain a radiation protection program.
- 9.2 The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

10 CONVENTIONAL HEALTH AND SAFETY

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

11 ENVIRONMENTAL PROTECTION

- 11.1 The licensee shall implement and maintain an environmental protection program.

12 EMERGENCY MANAGEMENT AND FIRE PROTECTION

- 12.1 The licensee shall implement and maintain an emergency preparedness and response program.
- 12.2 The licensee shall implement and maintain a fire protection program.

13 WASTE MANAGEMENT

- 13.1 The licensee shall implement and maintain a waste management program.
- 13.2 The licensee shall maintain a preliminary decommissioning plan and cost estimate.

14 SECURITY

- 14.1 The licensee shall implement and maintain a security program.
- 14.2 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

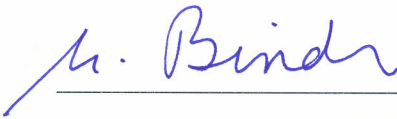
15 SAFEGUARDS AND NON-PROLIFERATION

15.1 The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

16 PACKAGING AND TRANSPORT

16.1 The licensee shall implement and maintain a packaging and transportation program.

SIGNED at OTTAWA, this 22nd day of October, 2014



Michael Binder, President,
On behalf of the Canadian Nuclear Safety Commission

MCP ACTUEL : INSTALLATIONS PROTOTYPES DE GESTION DES DÉCHETS

Le Manuel des conditions de permis actuel est fourni dans les pages suivantes du document (*en anglais seulement – le document est disponible sur demande en français*).

e-Doc 4422665 (Word)

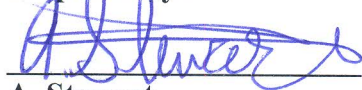
e-Doc 4463228 (PDF)

Directorate of Nuclear Cycle and Facilities Regulation – Wastes and Decommissioning Division	Prototype Waste Facilities	E-doc No.: Word 4422665 PDF 4463228	Prepared by: A. Stewart	
Reviewed by: WDD Director Approved by: DNCFR Director General	Subject: Compliance Framework Document Associated with the Waste Facility Decommissioning Licence	Effective Date:: July 25, 2014	Rev.: 0	Page 1 of 58

Licence Conditions Handbook

Compliance Framework Document Associated with the Prototype Waste Facilities Waste Facility Decommissioning Licence WFDL-W4-332.00/2034

Prepared by:



A. Stewart
Project Officer
Wastes and Decommissioning Division (WDD)

2014-07-25
Date

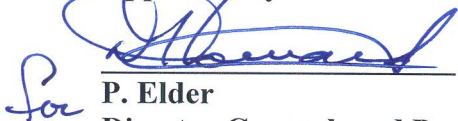
Reviewed by:



D. Howard
Director
Wastes and Decommissioning Division (WDD)

July 25/14
Date

Approved by:



P. Elder
Director General, and Project Sponsor
Directorate of Nuclear Cycle and Facilities Regulation (DNCFR)

July 25/14
Date

Directorate of Nuclear Cycle and Facilities Regulation – Wastes and Decommissioning Division	Prototype Waste Facilities	E-doc No.: Word 4422665 PDF 4463228	Prepared by: A. Stewart	
Reviewed by: WDD Director Approved by: DNCFR Director General	Subject: Compliance Framework Document Associated with the Waste Facility Decommissioning Licence	Effective Date:: July 25, 2014	Rev.: 0	Page 2 of 58

Revision History:

Effective Date	Rev	LCH E-DOCS #	Section(s) changed	Description of the Changes	DCR E-DOCS #
2014-07-25	R000	4463228	N/A	Original Document	N/A

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INTRODUCTION

A.1 BACKGROUND

The licensing philosophy of the Canadian Nuclear Safety Commission (CNSC) requires that licensees be provided with both a licence and an associated Licence Conditions Handbook (LCH). The licence for these facilities, a Waste Facility Decommissioning Licence (WFDL) contains clear and concise licence conditions, grouped by Safety and Control Area (SCA) which identify programs that must be implemented and maintained by the licensee. These are based on information submitted in the licence application to demonstrate to the Commission that the applicant has adequate measures in place to fulfill all licensing requirements (NSCA paragraph 24(4)(a) and (b)).

The LCH associated with WFDL-W4-332.00/2034 contains; compliance verification criteria, information on delegation of authority to staff, references to licensee's documentation, references to standards and CNSC regulatory documents and any commitments made by the licensee to ensure compliance with regulatory expectations.

In some cases, standards or regulatory documents may be listed in this document which has been developed for use in Nuclear Power Plants (NPP). As appropriate and as determined by CNSC staff, these requirements may be applied to nuclear facilities other than NPPs, with due consideration of the differences in hazard potential and complexity of affected systems compared to those of a NPP.

The following CNSC staff are authorized to approve changes to this LCH:

- Director, Wastes and Decommissioning Division (WDD)
- Director General, Directorate of Nuclear Cycle and Facilities Regulation (DG DNCFR),
- Executive Vice-President, Regulatory Operations Branch (EVP ROB).

A.2 PURPOSE OF LCH

The purpose of this handbook is to provide compliance verification criteria to the licensee and CNSC staff on how to ensure compliance with the licence. It is met by establishing and consolidating in one document the compliance framework associated with the Prototype Waste Facilities licence. It clarifies CNSC staff expectations which includes; defining the licensing basis, explaining the regulatory context related to each licence condition; defining procedures for modifying documents and identifying verification criteria for each licence condition.

A.3 LCH CHANGE CONTROL PROCESS

A change control process has been developed for revisions to the LCH to ensure that preparation and use of it is controlled and that all references are identified and maintained.

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Change Control Process

An effective change control process is applied to the LCH to ensure that:

- preparation and use of this document is properly controlled;
- all referenced documents are correctly identified and maintained; and
- procedures for modifying this document are clear.

The requester (CNSC staff or the licensee) submits the proposed change to the Project Officer who takes the following sequential steps to modify the LCH:

- initiate a change request using the change request form in Part H.
- obtain endorsement from the Director of the Wastes and Decommissioning Division;
- coordinate review by the identified subject matter experts (CNSC specialists);
- get the licensee input on proposed changes;
- obtain approval from a delegated authority
- forward the approved Change Request to the Director of the Wastes and Decommissioning Division for record retention.

The authority to approve changes to the LCH has been delegated to the Executive Vice-President, Regulatory Operations Branch, the Director General of the Directorate of Nuclear Cycle and Facilities Regulation, and the Director of the Wastes and Decommissioning Division.

A.4 PROTOYPE WASTE FACILITY SPECIFIC

Acceptability

There are locations in the licence where licence conditions reference the phrase “acceptable to the Commission or a person authorized by the Commission”. This refers to the Commission’s authority to issue and amend licences pursuant to the section 24 of the NSCA.

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Where delegation of the Commission’s authority to CNSC staff has been granted by the Commission, “a person authorized by the Commission” means CNSC staff as long as the consent is within the authority that can be delegated under the *Act* and within the licensing basis. For the Prototype Waste Facilities, CNSC staff within the Regulatory Operations Branch that have been granted this authority include; the EVP ROB, the DG DNCFR, and the Project Officer overseeing the licensing and compliance activities.

The CNSC encourages licensees to make ongoing and proactive improvements to the programs and documents that are associated with the licensed activity. An improvement to a program is one which moves the licensing basis in a safe direction, and one which does not represent a loosening of the safety case for the facility. The licensee may also propose changes to the programs that are licensing basis neutral or are in a direction away from the licensing basis. CNSC staff will review the proposed changes to ensure they do not adversely impact the licensing basis. An initial assessment will be made to determine if the proposed changes are purely administrative in nature, or if they are related to the safety and design envelope that has been established for the facility. If the proposed changes are safety case neutral, or one which moves the licensing basis in a safe direction, the LCH will be amended as described under section A.3 of this document. However, if during the review, CNSC staff finds that the proposed changes are not in the safe direction, CNSC staff will advise the licensee of its findings and of its options, should it wish to proceed with consideration of the amended program.

The following table provides a summary of the authorities in relation to the issue of “acceptability” for the Prototype Waste Facilities licence:

Entity	Authority	Restrictions
Commission	Issue, renew, suspend in whole or in part, amend, revoke or replace a licence on receipt of an application (Section 24 of the NSCA)	Authorities are set out in the NSCA
Person authorized by the Commission	Approval of activities specifically authorized by the Commission during the licensing hearing and acceptance of programs or plans or changes to programs or plans if the proposed changes are safety case neutral, or ones which move the licensing basis in a safe direction.	Restricted to authorities that were granted by the Commission during the licensing hearing and restricted to the EVP ROB, the DG DNCFR, and Project Officer overseeing the licensing and compliance activities for the Prototype Waste Facilities.

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Notification Requirements

Table A-1: Documents that Require the CNSC Acceptance Prior to Implementation of Revisions

Document Number	Title	E-DOCS #	Licence Condition
22-03610-SAR-001	Safety Analysis Report for the Douglas Point Waste Management Facility	4399610	1.1, 1.4, 6.1, 7.1
61-508770-REPT-001	Gentilly-1 Storage with Surveillance Safety Analysis Report	4399610	1.1, 1.4, 6.1, 7.1
64-03610-SAR-001	Safety Analysis Report for the Nuclear Power Demonstration Waste Management Facility	4399610	1.1, 1.4, 6.1, 7.1
NA	DPWF Detailed Decommissioning Plan	NA	2.1, 13.2
NA	G1WF Detailed Decommissioning Plan	NA	2.1, 13.2
NA	NPDWF Detailed Decommissioning Plan	NA	2.1, 13.2

Table A-2: Documents that Require Notification Prior to Implementation of Revision

Document Number	Title	E-DOCS #	Licence Condition
CW-514100-MAN-001	Management System	4247157	1.1, 3.1
RC-2000-633-0	AECL's Research's Radiation Protection Requirements	4331868	1.1, 1.3, 9.1
22-00960-SWS-001	Douglas Point Waste Management Facility Storage with Surveillance Plan	4422646	1.1, 1.3, 1.4, 8.1
61-01600-SWS-001	Gentilly-1 Waste Management Facility Storage with Surveillance Plan	3953992	1.1, 1.3, 1.4, 8.1
64-1600-SWS-001	Nuclear Power Demonstration Waste Management Facility Storage with Surveillance Plan	3954000	1.1, 1.3, 1.4, 8.1
3600-514200-QAP-001	Facilities Decommissioning Quality Assurance Plan	4416228	1.3, 3.1, 13.1, 13.2
CW-508300-OV-146	Decommissioning Process Overview		1.3
CW-513430-REPT-001	Public Information Program for Atomic Energy of Canada	4241081	1.7, 5.1
NA	MOU between NRCAN and AECL on the Nuclear Legacy Liabilities Program	NA	2.2

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Document Number	Title	E-DOCS #	Licence Condition
6400-05600-130-485	Relating to Provision of Financial Guarantees for AECL Sites	NA	2.2
145-514100-016-000-0001	Management System Appointments Registry	NA	3.1
145-514020-OV-001	Human Performance	4389410	4.1
CW-510000-MAN-001	AECL Systematic Approach to Training (SAT)	4054741	4.2
22-08951-FHA-001	Douglas Point Waste Management Facility Fire Hazard Analysis	4002506	8.1
61-S08720-FHA-001	Gentilly-1 Waste Management Facility fire Hazard Analysis	4131005	8.1
64-508720-FHA-001	Nuclear Power Demonstration Fire Hazard Analysis	4002706	8.1
CW-510400-MAN-001	Occupational Health and Safety Program Manual	4265010	10.1
CW-509200-OV-113	Environmental Management System	3411188	11.1
CW-508730-GDI-109	Emergency Preparedness Program	4264990	12.1
22-08620-021-000	Douglas Point Emergency Response Service Agreement	NA	12.1
61-00060-021-000	Hydro Quebec for Security Guard Services	NA	12.1
64-508720-021-00	MoU with Laurentian Hills for the Provision of Fire emergency Response services	NA	12.1
145-508720-OV-001	Fire Protection Program Overview	3430769	12.2
145-508720-PRO-005	Off-Site Fire Protection	3998241	12.2
CW-508600-OV-129	Waste Management Program Overview	4439420	13.1
CW-508600-GDI-108	Waste Management Program Documentation Index and Definition	4432716	13.1
22-00960-PDP-001	Douglas Point Waste Management Facility Preliminary Decommissioning Plan	1135533	13.2
61-01600-PDP-001	Gentilly-1 Waste Management Facility Preliminary Decommissioning Plan	1260531	13.2

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Document Number	Title	E-DOCS #	Licence Condition
64-01600-PDP	NPD Waste Management Facility Preliminary Decommissioning Plan	1260531	13.2
EPS-14000-RPT-17	Chalk River Site Security Report	NA	14.1
145-508710-OV-001	Physical Security	NA	14.1
CW-508510-GDI-107	Nuclear Materials and Safeguards Management Governing Documentation Index	NA	15.1
CW-508510-REQ-119	Nuclear Materials and Safeguards Management	4177320	15.1
CW-508510-OV-137	Nuclear Materials and Safeguards Management Program Overview	3524606	15.1
CW-508520-GDI-106	Radioactive Materials Transportation Documentation Index and Definitions	4002266	16.1
CW-508520-OV-138	Transportation of Dangerous Good Overview	4002265	16.1
CW-508520-REQ-203	Radioactive Material Transportation Requirements	4177330	16.1

Declaration of Licence Non-Compliance

There may arise situations where the licensee becomes aware of a non-compliance with the licence. This section provides clarification on how the licensee may meet regulatory expectations for addressing these situations.

Upon identification of a non-compliance with the licence, when applicable and/or requested by the CNSC, the licensee is expected to submit a corrective action plan (CAP) to address the issue. The CAP should provide the following information:

1. Corrective actions to resolve the non-compliance,
2. Corrective actions to prevent reoccurrence of the non-compliance as applicable,
3. Commitment to a completion date,
4. The person (job title) responsible for the implementation of the corrective action, and
5. Any interim compensatory measures (that will provide an equivalent level of safety to the identified non-compliance) to be implemented until the corrective action(s) is fully implemented.

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Completion dates should be developed based upon the safety of persons and the environment associated with the deficiencies. In all cases, implementation of this procedure does not release the licensee of its' obligations to report situations as required by the NSCA, the regulations or the licence.

Licensee Commitments

In cases where codes, standards or requirements have been changed, or where adoption of or amendment to internal programs is underway, licensee commitments may be developed for implementation. If accepted by CNSC staff, these are not considered to be non-compliances and will be reported in this section of the LCH. The following table provides a summary of licensee commitments currently in effect for the Prototype Waste Facilities. Upon completion of a licensee commitment and upon revision of the LCH, the commitment will be removed.

Table A-3: Timelines for Licensee Commitments

Licensee Commitment	SCA	Completion Date	Notes
Public Information Program Update	Other	September 2014	Update the licensee's Public Information Program documentation to define public disclosure criteria of routine radiological and non-radiological emissions, and non-routine items or events.
Updated Preliminary Decommissioning Plan	Waste Management	December 2014	Revise the Preliminary Decommissioning Plans to update the cost estimates, conform to the licensee's decommissioning process, and comply with CNSC Regulatory Guide G-219, Decommissioning Planning for Licensed Activities and CSA Standard N294-09, Decommissioning Facilities Containing Nuclear Substances.
Occupational Safety and Health Compliance Program	Conventional Health and Safety	December 2014	The licensee is conducting a gap analysis on the Occupational Safety and Health Compliance Program. A corrective action plan will be issued upon completion.
Emergency Preparedness Program Self-Assessment	Emergency Management and Fire Protection	February 2015	Results of the self-assessment will be submitted to CNSC staff.

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Licensee Commitment	SCA	Completion Date	Notes
Updated Storage with Surveillance Plans	Fitness for Service	March 2015	Updated Storage with Surveillance Plans will be submitted to CNSC staff.
Self-Assessment of RP program	Radiation Protection	March 2015	The licensee has committed to conduct a self-assessment of the RP program and submit finding to CNSC staff.
FHA update	Emergency Management and Fire Protection	December 2015	Complete actions from Fire Hazard Analysis (FHAs) undertaken at each facility.
Effluent Monitoring Program	Environmental Protection	April 2016	The effluent monitoring program will be revised to bring into compliance with CSA N288.5.

PART B: COMPLIANCE VERIFICATION FRAMEWORK

CNSC staff will ensure that the licensee is complying with the conditions set out in the licence in accordance with CNSC Regulatory Document [P-211 COMPLIANCE \(2001\)](#). These assessments will be conducted in relation to the documents, programs and procedures identified in of this LCH, and, in relation to the requirements of the [NSCA](#) and the regulations made pursuant to the [NSCA](#).

Data collection mechanisms for verification include, but are not limited to evaluations of;

- Type II baseline compliance inspections.
- Type II augmented inspections.
- Type I inspections (audits).
- Annual Compliance Reports
- Discussions and interviews with staff.
- Any reportable events made pursuant to sections 29 and 30 of the [General Nuclear Safety and Control Regulations](#).

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- Any non-reportable event submitted to the CNSC.
- Any follow-up root cause analyses and resulting corrective action plans.
- On-going OPEX assessments that may be reported to the CNSC
- Other information that may be provided to the CNSC.

The compliance verification criteria for each licence condition which are provided in the LCH define the key documents and programs by which compliance with the licence will be assessed. These criteria do not replicate the requirements of the [NSCA](#) and the regulations made under the [NSCA](#), although they also apply in all situations. Data collection mechanisms are not replicated in the following sections of this LCH however, they do apply to all aspects of compliance verification for this licence.

In the licence, conditions have been grouped by [SCA](#). A definition of each [SCA](#) is given at the beginning of each subsection of the LCH. The explanation of each licence condition is discussed in three subsections:

Preamble

Provides regulatory context related to the licence condition and provides where applicable, reference to related information.

Compliance Verification Criteria

This section provides information on how to determine compliance against the licence condition. Implementation of programs will be assessed through the CNSCs' compliance program and will be measured against performance objectives and regulatory expectations.

Recommendations and Guidance

This section provides additional guidance. This section may also be used to clarify CNSC expectations (which may be derived from best practices, CNSC guidance documents or other sources of guidance documents that are used by CNSC staff.

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PART C: LICENCE SECTIONS

C.1 SECTION I – LICENCE NUMBER

The licence number WFDL-W4-332.00/2034 was developed from the CNSC convention for identifying licences. The following table provides a description of each identifier used in the expression:

Identifier	Description
WFDL	Waste Facility Decommissioning Licence (CMD 01-M17 ESTABLISHING CLASSES OF LICENCES)
W4	Describing a Group 4 waste facility, as used by WDD
332	Corresponding to the Douglas Point Waste Facility. The facility identifiers 331 and 342 for the Gently-1 and NPD Waste Facilities will be consolidated under 332 upon issuance of the replacement licence.
00	Licence version number (00 = Initial licence, 01 = Amendment No.1, etc...)
2034	Expiration year

C.2 SECTION II – LICENSEE

This section provides the name and the address of the person or the corporate entity that holds the licence, which is referred to as the “licensee”. In this case it refers to:

Atomic Energy of Canada Limited
Chalk River Laboratories
Chalk River, Ontario K0J 1J0

C.3 SECTION III – LICENCE PERIOD

Identifies the duration for which the licence is valid, which for WFDL-W4-332.00/2034 is from July 16, 2014 to December 31, 2034, unless suspended, amended, revoked, or replaced.

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C.4 SECTION IV – LICENSED ACTIVITIES

This section identifies the activities that are being licensed. The box below contains a copy of the text in the licence. These are from the list of activities described in section 26 of the [Nuclear Safety and Control Act](#)¹.

This licence authorizes the licensee to:

- a) decommission the Douglas Point WF, Gentilly-1 WF, and NPD WF, as further described and located on the sites defined in the WFDL-W4-332.00/2034 LICENCE CONDITIONS HANDBOOK.
- b) possess, transfer, use, process, package, manage, and store nuclear substances that are required for, associated with or arise from the activities described in a);
- c) possess and use prescribed equipment and prescribed information that are required for, associated with or arise from the activities described in a) and b)

Douglas Point Waste Facility (DPWF) Location

The DPWF is located at the Bruce Power Site, which is midway between Kincardine and Port Elgin, Ontario on the eastern shore of Lake Huron. It comprises parts of Lots 15 and 16 in Lake Range, in the Township of Bruce in the County of Bruce. This area is primarily rural and there is no single major urban centre in this region. Access can only be obtained by entering the Bruce Power Site through Bruce Power Security Main Gatehouse. The location within the Bruce Power Site is shown in Figure 2-2 of the Safety Analysis Report for the Douglas Point Waste Facility; 22-03610-SAR-001.

Gentilly-1 Waste Facility (G1WF) Location

The G1WF is located in Bécancour, Quebec, on the south bank of the St. Lawrence River. The site located approximately 14 km in a direct line east from the city of Trois-Rivières. The G-1 WF is adjacent to the Gentilly-2 (G-2) Nuclear Generating Station (NGS), owned by Hydro-Québec. The location of the Gentilly site, including both the G-1 WF and G-2 NGS is shown in Figure 2-2 of the Gentilly-1 Storage with Surveillance Safety Analysis Report; 61-508770-REPT-001.

¹ S.C., 1997, c.9

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Nuclear Power Demonstration Waste Facility (NPDWF) Location

The NPDWF is located in the town of Laurentian Hills (Renfrew County, Ontario) 200 km northwest of Ottawa and is situated adjacent to the west bank of the Ottawa River. The NPDWF is located about 25 km northwest of the CRL site alongside the Ottawa River.

The NPDWF site has an area of 3.85 km² (952 acres). The facility layout is captured in Figure 2-2 of the Safety Analysis Report for the Nuclear Power Demonstration Waste Facility; 64-03610-SAR-001.

C.5 SECTION V – EXPLANATORY NOTES

This section provides guidance such as compliance verification criteria for each licence condition and CNSC technical expectations. The LCH is associated with the WFDL without making it a specific licence condition.

- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.
- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated *Regulations*.
- (iii) The WFDL-W4-332.00/2034 LICENCE CONDITIONS HANDBOOK (LCH) provides compliance verification criteria in order to meet the conditions listed in the licence. The LCH also provides information regarding delegation of authority and applicable versions of documents.

C.6 SECTION VI – CONDITIONS

This section of the licence lists the licence conditions that the licensee **shall** follow. For clarity, CNSC staff has grouped the licence conditions as follows; General, Decommissioning, Safety and Control Area and Facility Specific. The following section describes how compliance will be verified for each licence condition.

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PART D: GENERAL LICENCE CONDITIONS

The following is a list of General Licence Conditions with associated compliance verification criteria.

Licence Condition 1.1 – Conduct of Activities

1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis.

Preamble

The licence is issued by the Commission pursuant to section 24 of the *Nuclear Safety and Control Act* (NSCA) while the licensing basis was defined by the CNSC in CNSC Regulatory Document [INFO-0795 LICENSING BASIS OBJECTIVE AND DEFINITION \(2010\)](#).

Compliance Verification Criteria

CNSC Regulatory Document [INFO-0795 LICENSING BASIS OBJECTIVE AND DEFINITION \(2010\)](#) sets out what an applicant must do to demonstrate that the applicant is qualified to carry out the authorized activity, and that appropriate provisions are in place for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity, and thus establishes the basis for the CNSC’s compliance program in respect of that regulated facility or activity. The licensing basis for a regulated facility or activity is a set of requirements and documents comprising of the requirements set out in the applicable laws and regulations, the conditions and safety and control measures described in the facility’s or activity’s licence, and the safety and control measures described in the licence application and the documents needed to support it.

CNSC staff will review the proposed changes to the document to ensure they do not adversely impact the licensing basis. If the proposed changes are acceptable, the LCH will be amended as described under section A.3 of this document. However, if during the review, CNSC staff finds that the proposed changes to the document are not in the safe direction, the CNSC staff will advise the licensee of its findings and will advise the licensee of its options, should it wish to proceed.

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Recommendations and Guidance

Documents needed to support the licence application are those documents which demonstrate that the applicant is qualified to carry out the licensed activity, and that appropriate provisions are in place for the protection of worker and public health and safety, for the protection of the environment, and for the maintenance of national security and measures required to implement international obligations to which Canada has agreed. Examples are: detailed documents supporting the design and all aspects of operation to which the licensee makes reference, the safety report, documents describing conduct of decommissioning and documents describing conduct of maintenance. These documents would include: regulatory documents (such as P-290, G-320, plus others), industry codes and standards (such as CSA standards, National Fire Code of Canada and National Building Code of Canada, plus others); and licensee-produced documents and any subsequent changes made to these documents in accordance with a CNSC-approved change control process.

Licence Condition 1.2 – Inconsistencies

1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

Preamble

Any conflict or inconsistency identified will be discussed between the licensee and CNSC staff and the outcome of such discussions will be documented as described in section A.3 of this LCH. The LCH will then be revised accordingly and reissued.

Compliance Verification Criteria

During compliance verification activities CNSC staff will consult the programs listed in Section A.4 of the LCH to ensure that the documentation is being reviewed and revised at the required frequency.

Recommendations and Guidance

None provided.

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Licence Condition 1.3 – Operating Policies and Programs

1.3 The licensee shall implement and maintain decommissioning policies, programs and procedures.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence to decommission a Class I nuclear facility shall contain the *proposed measures, methods and procedures for carrying on the decommissioning*.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

This licence condition requires that the licensee implement and maintain adequate decommissioning policies, programs and procedures. These:

- define the operating rules consistent with the safety report and other licensing support documentation within which the facility will be maintained
- specify the authorities of facility staff to make decisions within the defined boundaries and,
- identify and differentiate between actions where discretion may be applied and where jurisdictional authorization is required.

The licensee must comply with their policies, programs and procedures at all times.

Recommendations and Guidance

The licensee will provide written prior notification of any change to these documents indicating if it represents a change in instruction or direction, or a change in operations.

CNSC staff will review any proposed changes to ensure they do not adversely impact the licensing basis. If they do not adversely impact the licensing basis the LCH will be amended as described under section A.3 of the LCH. If the proposed changes are not in the safe direction, the CNSC will advise the licensee so that it may consider its options prior to implementation.

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Licence Condition 1.4 – Changes to Polices, Programs and Procedures

1.4 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence to decommission a Class I nuclear facility shall contain the the *proposed measures, methods and procedures for carrying on the decommissioning*.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The licensee must comply with their policies, programs and procedures at all times. This licence condition ensures that any proposed changes are reviewed by the CNSC to assure that they do not adversely change the licensing basis.

Recommendations and Guidance

None provided.

Licence Condition 1.5 – Contractors

1.5 The licensee shall ensure that every contractor working at the facility complies with this licence.

Preamble

As part of the licensee’s operations, contractors may be employed for maintenance activities within the boundaries of the licensed facility. Through the implementation of ‘construction islands’, the contractor has authority within the area to manage its own activities. However, this does not relieve the licensee of its obligations under the [NSCA](#) to manage its licensed facilities. Section 12 of the [General Nuclear Safety and Control Regulations](#), clearly defines licensees obligations.

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Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The management of contractors will be evaluated against the following elements and principles:

- The risks to contractors and risks to the organization from the use of contractors are evaluated to identify, assess, and eliminate or control hazards;
- Contractors are adequately trained in up-to-date procedures and are qualified and competent (i.e., knowledge, skills, and abilities) to conduct work within the licensed facility;
- Work carried out by the contractor is approved by competent members of the licensee’s staff and monitored by qualified personnel.

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Recommendations and Guidance

None provided.

Licence Condition 1.6 – Licensee Commitments

1.6 The licensee shall comply with all licensee commitments as defined in the WFDL-W4-332.00/2034 LCH.

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Preamble

In cases where codes, standards or requirements have been changed, or where adoption of or amendment to internal programs is underway, licensee commitments may be developed for implementation. If accepted by CNSC staff, these will become enforceable through the licence and will be listed in the LCH. Upon completion of a licensee commitment and upon revision of the LCH, the commitment will be removed.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

Recommendations and Guidance

None provided.

Licence Condition 1.7 – Public Information

1.7 The licensee shall implement and maintain a public information program and disclosure program.

Preamble

The [General Nuclear Safety and Control Regulations](#) and the [Class I Nuclear Facilities Regulations](#) contain provisions relevant to this SCA. The primary goal of the public information program, as it relates to the licensed activities, is to ensure that information related to the health, safety and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. As a component, where the public has indicated an interest to know, the program shall include a commitment to and protocol for ongoing, timely communication of information related to the licensed facility during the course of the licence period.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

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The licensee is expected to comply with CNSC Regulatory Document [RD/GD-99.3 REQUIREMENTS AND GUIDANCE FOR PUBLIC INFORMATION AND DISCLOSURE \(2012\)](#). Given the recent publication of this document, the licensee is expected to provide information concerning implementation of their public disclosure protocol in its operational reports as set out in section LC 5.1 of this LCH.

Recommendations and Guidance

CNSC Regulatory Document [RD/GD-99.3 REQUIREMENTS AND GUIDANCE FOR PUBLIC INFORMATION AND DISCLOSURE \(2012\)](#) provides information on the regulatory requirements for public information programs for Class I nuclear facilities. This document provides guidance on how licensees and licence applicants can meet regulatory requirements by providing explanatory information, process and procedural guidance, and examples of good practices currently in use in the nuclear sector.

PART E: DECOMMISSIONING LICENCE CONDITIONS

Decommissioning Activities are authorized as set out in Part IV a) of the licence. The licensee is authorized to maintain the facilities while in a phase of Storage with Surveillance. The following is a list of decommissioning related Licence Conditions with associated compliance verification criteria.

Licence Condition 2.1 –Decommissioning Plans

2.1 The licensee shall submit a Detailed Decommissioning Plan for acceptance by the Commission or a person authorized by the Commission prior to the commencement of dismantlement activities described in paragraph a) of Part IV of this licence.

Preamble

This licence condition requires that the licensee submit Detailed Decommissioning Plan prior to the commencement of dismantlement activities. This is to assure that worker health and safety and the environment are adequately protected from adverse impacts resulting from approved dismantlement activities.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

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Recommendations and Guidance

None provided.

Licence Condition 2.2 – Financial Guarantee

2.2 The licensee shall maintain in effect a financial guarantee for the decommissioning of the Prototype Waste Facilities.

Preamble

The [General Nuclear Safety and Control Regulations](#) requires that a licence application contains “a description of any proposed financial guarantee relating to the activity to be licensed”.

Compliance Verification Criteria

The financial guarantee for decommissioning is to be reviewed and revised by the licensee every 5 years, when required by the Commission or person authorized by the Commission, or following a revision of the preliminary decommissioning plan if it significantly impacts the financial guarantee. The licensee’s financial guarantee is expected to be compliant with the criteria set out in the CNSC Regulatory Document [G-206 FINANCIAL GUARANTEES FOR THE DECOMMISSIONING OF LICENSED ACTIVITIES \(2000\)](#).

Recommendations and Guidance

CNSC Regulatory Document [G-206 FINANCIAL GUARANTEES FOR THE DECOMMISSIONING OF LICENSED ACTIVITIES \(2000\)](#) sets out guidance on the development of financial guarantees for licensed facilities and activities. CSA Standard [N294-09 DECOMMISSIONING OF FACILITIES CONTAINING NUCLEAR SUBSTANCES \(2009\)](#) provides direction on the decommissioning of licensed facilities and specifies requirements for the planning, preparation, execution and completion of decommissioning.

PART F: SAFETY AND CONTROL AREA LICENCE CONDITIONS

The following is a list of Licence Conditions with associated compliance verification criteria organized by Safety and Control Area.

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MANAGEMENT SYSTEM

The SCA “Management System” covers the framework which establishes the processes and programs required to ensure an organization achieves its safety objectives and continuously monitors its performance against these objectives while fostering a healthy safety culture.

Licence Condition 3.1 – Management System

3.1 The licensee shall implement and maintain a management system.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#)² that *an application for a licence for a Class I nuclear facility, other than a licence to abandon, shall contain the proposed quality assurance program for the activity to be licensed.* Safe and reliable decommissioning requires a commitment and adherence to a set of management system principles and, consistent with those principles, the establishment and implementation of a planned and systematic pattern of actions that achieve the expected results. An adequately established and implemented management system provides CNSC staff confidence and evidence that the legal basis under which the Commission made its decision and had issued a licence, pursuant to section 24 of the [Nuclear Safety and Control Act](#), remains valid.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents set listed in Section A.4 of this LCH.

CNSC staff considers that an acceptable management system is the implementation of such a system complying with the requirements of the CSA Standard [CSA Standard N286 -05 MANAGEMENT SYSTEM REQUIREMENTS FOR NUCLEARPOWER PLANTS](#).

Recommendations and Guidance

The management and decommissioning of the licensee’s waste facility are defined by the programs, processes and associated nuclear governing documents as described in the licensee’s management system. An integrated management system encompasses, but is not limited to: safety, environmental, health, security management, management system oversight, quality assurance, organizational structure, roles and responsibilities, risk management, business management, strategic management, resource management, leadership, organizational change management, document control, review of safety management performance and safety culture.

² SOR/2000-204

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As part of management system, the CNSC recognizes the following as characteristics which contribute to a healthy safety culture: safety is a clearly recognized value, leadership is clear, accountability is clear, safety is integrated into all activities, safety is learning-driven and the work environment is safety conscious.

The licensee is expected to conduct self-assessments of safety culture periodically. The assessment method should be documented and the framework should include links to the safety culture characteristics listed above.

HUMAN PERFORMANCE MANAGEMENT

The SCA “Human Performance Management” covers activities that enable effective human performance through the development and implementation of processes that ensure that licensee staff are sufficient in number in all relevant job areas and have the necessary knowledge, skills, procedures and tools in place to safely carry out their duties.

Licence Condition 4.1 – Human Performance

4.1 The licensee shall implement and maintain a human performance program.
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Preamble

Human performance relates to reducing the likelihood of human error in work activities. It refers to the outcome of human behaviour, functions and actions in a specified environment, reflecting the ability of workers and management to meet the system’s defined performance under the conditions in which the system will be employed.

It is important that the licensee continuously monitors human performance, takes steps to identify human performance weaknesses, improves human performance and reduces the likelihood of nuclear safety events with human performance-related causes and root causes. Human Factors are factors that influence human performance as it relates to the safety of a nuclear facility or activity over all design and decommissioning phases. These factors may include the characteristics of the person, task, equipment, organization, environment, and training. The consideration of human factors in issues such as interface design, training, procedures, and organization and job design may affect the reliability of humans performing tasks under various conditions.

The [General Nuclear Safety and Control Regulations](#) require various elements related to the human performance program.

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Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

It is CNSC staff expectation that the licensee continuously monitors human performance, takes steps to identify human performance weaknesses, improves human performance and reduces the likelihood of nuclear safety events with human performance-related causes and root causes.

Recommendations and Guidance

Licensees should implement a program that continuously monitors human performance, takes steps to identify human performance weaknesses, improves human performance, and reduces the likelihood of human performance related causes and root causes of nuclear safety events. The Human Performance Program should address and integrate the range of human factors that influence human performance, which include, but may not be limited to the following:

- The provision of qualified staff
- The reduction of human error
- Organizational support for safe work activities
- The continuous improvement of human performance

CNSC Regulatory Policy P-119 “Policy on Human Factors” requires that the CNSC takes human factors into account in its regulatory activities. CNSC staff evaluate the measures proposed by licence applicants and those implemented by the licensee to address human factors, to determine whether these measures meet CNSC expectations.

Licence Condition 4.2 – Training

4.2 The licensee shall implement and maintain a training program.

Preamble

The [Class I Nuclear Facilities Regulations](#) requires that an application for a licence to decommission a Class I nuclear facility shall contain *the proposed responsibilities of and qualification requirements and training program for workers*. The [General Nuclear Safety and Control Regulations](#) requires the licensee to *train the workers to carry on the licensed activity in accordance with the [Act](#), the Regulations made under the [Act](#) and the licence*.

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Compliance Verification Criteria

The licensee shall ensure that personnel have been adequately trained to up-to-date procedures and are qualified and competent (e.g., knowledge, skills, and abilities). Only qualified and competent personnel shall be allowed to carry out duties of their employment.

The licensee shall ensure that personnel have a level of training related to nuclear safety, radiation safety, fire safety, onsite emergency arrangements, and conventional health and safety corresponding to the duties of their employment.

The licensee shall ensure that personnel records in support of qualification and competency are established and maintained.

Although contractors may perform certain licensed activities in these circumstances, the licensee retains the responsibility that the facility remains compliant with the licence. As such, the licensee is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public and workers, and the environment are protected. This accountability to the CNSC cannot be delegated through contractual arrangements.

Recommendations and Guidance

Training programs ensure that a sufficient number of qualified workers are available to carry out the licensed activities. These programs must provide licensee staff in all relevant job areas with the necessary knowledge and skills to safely carry out their duties.

OPERATING PERFORMANCE

The SCA “Operating Performance” covers an overall review of the conduct of the licensed activities and the activities that enable effective performance.

Licence Condition 5.1 – Operational Reporting

5.1 The licensee shall implement and maintain a process for reporting to the Commission or a person authorized by the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations.

Preamble

The licensee is required to report on its activities at the Prototype Waste Facilities. This requirement provides information to the CNSC on the results of its operations, the results of the monitoring programs, any changes made to procedures, equipment, or structures, and a summary of any reports made pursuant to sections 29 and 30 of the *General Nuclear Safety and Control Regulations*.

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Compliance Verification Criteria

CNSC staff will verify that the licensee submits an annual report to the CNSC within 60 days of the end of the fiscal year that will include:

- the principal licensed activities completed;
- the results of monitoring programs;
- a summary description of events reported to the Commission pursuant to sections 29 and 30 of the *General Nuclear Safety and Control Regulations*;
- a summary description of any changes in the methods, procedures and equipment used to carry out the licensed activities, and any modifications made to the facility; and
- information concerning implementation of their public disclosure protocol associated with Regulatory Document [RD 99.3, REQUIREMENTS AND GUIDANCE FOR PUBLIC INFORMATION AND DISCLOSURE](#) and,
- a trending analysis of operational performance.

The licensee is expected to also include a status report on all outstanding Corrective Action Plans generated from regulatory findings which shall include the proposed close-out items and applicable criteria.

Recommendations and Guidance

The licensee should include the following information in the Compliance Report:

1. Summary of the Operating Experience of the Facility

An introductory statement should include:

- i) the facility name and location,
- ii) the operating licence number,
- iii) the reporting period,
- iv) a brief summary of the facility's purpose and its operation and associated activities in the reporting period,
- v) an update of the positions related to the WFDL referenced in *Management System Appointments Registry*

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2. Waste Inventory

- a) For the stored wastes, the following information should be included:
 - i) the types of waste,
 - ii) the source of each waste type,
 - iii) with respect to each waste type: the volume, specific activity, radionuclide content, and concentrations of other hazardous materials,
 - iv) the total activity in each waste type, the total activity of each radionuclide, and the quantities of other hazardous materials in each waste type, and
 - v) any chemical or biological hazards associated with each waste type.
- b) If no change other than radioactive decay has occurred during the reporting period, a statement to this effect should be included.
- c) If, during the reporting period, waste has been removed and transferred from the licensee's control or facility components or equipment have been decommissioned and either stored or transferred from the licensee's control, the following information should be included:
 - i) the type of waste or component or equipment,
 - ii) details of the removal or decommissioning or both,
 - iii) details of the transfer, including the transfer destination and date of transfer,
 - iv) with respect to each type of waste or component or equipment: the volume or weight, specific activity, radionuclide content, and concentrations of other hazardous materials,
 - v) the total activity in each type of waste or component or equipment, the total activity of each radionuclide, and the quantities of other hazardous materials in each type of waste or component or equipment, and
 - vi) any chemical or biological hazards associated with each type of waste or

3. Effluent Treatment and Waste Processing

Where effluent is treated or waste is processed as a part of the facility operation, the following information should be included:

- i) the types of treatment and processing,

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- ii) the types of effluent treated and waste processed,
- iii) the radionuclides and other hazardous materials that are targeted for treatment or processing,
- iv) with respect to the volume of each type of effluent treated and each type of waste processed: its variation with time during the reporting period, as well as the cumulative total and the average for the entire period,
- v) with respect to each treatment or processing residue: its nature, its volume or weight, the total activity accumulated, the total activity of each radionuclide, and the quantities of other hazardous materials accumulated, and
- vi) the final disposition of each treatment or processing residue.

4. Modifications to the Facility

A change or modification

- i) the nature of the change or modification,
- ii) the reason for the change or modification,
- iii) the date of the approval or request of the c,
- iv) the implementation date of the change or modification, and
- v) a reference to any report prepared in conjunction with the authorized change or modification.

5. Radiation Protection

The results of the monitoring program that is referenced in licence condition 9.1 of the WFDL should be presented and include the following information:

- i) the dose received as a result of the facility operation during the reporting period by any person or group of persons, reported in such a way so as to protect each individual's right to privacy,
- ii) any incident where a target, an action level or a regulatory limit was exceeded, including specific data regarding the dose, a description of the cause, any remedial action taken, any corrective action taken or proposed, and a reference to any report prepared as a result,

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- iii) any trend or any abrupt change in the dose received (either an improvement or deterioration) during the reporting period or from one reporting period to the next, with a description of the cause and any necessary corrective action taken or proposed,
- iv) any approved change in the monitoring program, and
- v) an assessment of the impacts of the doses received.

6. Environmental Protection

The results of the monitoring programs that are required by licence condition 11.1 of the WFDL should include the following information:

- i) the ambient radiation fields in and around the facility during the reporting period,
- ii) any incident where a person or a normally uncontaminated part of the facility became contaminated with radioactive prescribed substances or other hazardous materials, including specific data on the quantities, concentrations, exposures and doses, a description of the cause, any remedial action taken, any corrective action taken or proposed, and a reference to any report prepared as a result,
- iii) with respect to the quantities and concentrations of radioactive prescribed substances and other hazardous materials that are released from the facility: their variation with time during the reporting period, as well as the cumulative totals and averages for the entire period,
- iv) any incident where a target, an action level or a regulatory limit was exceeded, including specific data on the quantities and concentrations, a description of the cause, any remedial action taken, any corrective action taken or proposed and a reference to any report prepared as a result,
- v) any trend or any abrupt change in the nature or magnitude of the releases (either an improvement or deterioration) during the reporting period or from one reporting period to the next, a description of the cause and any necessary corrective action taken or proposed,
- vi) any approved change in the monitoring programs, and
- vii) an assessment of the impacts of the releases⁷.

7. List of Discoveries

Any discovery reported pursuant to licence condition 1.2 of the WFDL should be listed with a summary that includes the following information:

- i) a description of what was discovered,

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- ii) the actions taken or proposed to be taken to respond to what was discovered,
- iii) the results of any sampling, and
- iv) a reference to any report submitted on the above.

8. Compliance with other Federal or Provincial Legislation

The involvement of other federal or provincial agencies in the regulation of the facility should be reported and the following information summarized:

- i) the basis and circumstances of each agency's involvement,
- ii) any permits, certificates or other licences that apply to the operation of the facility, including respective expiry dates,
- iii) any additional monitoring program required as a result of another agency's involvement,
- iv) the results of any monitoring, and
- v) any adverse impact on the environment that was revealed by the monitoring program, that is not already discussed elsewhere in the Compliance Report.

9. Human Performance Program

Any training or instruction program that was implemented by the licensee to ensure the safe operation of the facility should be listed with a summary that includes the following information:

- i) the type of training or instruction,
- ii) the number of personnel attending, and
- iii) the date and duration of instruction.

10. Public Information Program

A summary of the licensee's implementation of the public information program required pursuant to licence should be provided.

11. List of Reports

All reports prepared and submitted by the licensee to the Board during the reporting period should be listed.

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SAFETY ANALYSIS

The SCA “Safety Analysis” covers the maintenance of the safety analysis supporting the overall safety case for the facility. Safety analysis is a systematic evaluation of the potential hazards associated with the conduct of a proposed activity or facility and considers the effectiveness of preventative measures and strategies in reducing the effects of such hazards.

Licence Condition 6.1 – Safety Report

6.1 The licensee shall maintain a safety report for the facility.

Preamble

The [General Nuclear Safety and Control Regulations](#) requires that an application for a licence shall contain *a description and the results of any test, analysis or calculation performed to substantiate the information included in the application*, while the [Class I Nuclear Facilities Regulations](#) contains a provision requiring that applicants submit a *safety analysis report*.

Compliance Verification Criteria

Every 5 years, the licensee shall review the safety report for the facility to confirm that the document accurately captures the condition of the facility and that the radiological consequences of accident scenarios do not exceed public dose limits. Documentation of the review shall be submitted to CNSC staff who will confirm that the licensee employs appropriate assumptions, applies adequate scope and demonstrates acceptable results.

Recommendations and Guidance

The safety report is to be reviewed on a 5 year cycle and revised as necessary. During that period, the licence is expected to provide periodic updates to the report as needs or conditions change. Periodic updates as do not require ‘Acceptance’ but they do require ‘Notification’. However, the formal resubmission of the Safety Reports on the 5 year cycle requires ‘Acceptance’.

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PHYSICAL DESIGN

The SCA “Physical Design” relates to activities that impact on the ability of systems, components and structures to meet and maintain their design basis function given new information arising over time and taking changes in the external environment into account.

Licence Condition 7.1 – Change to Design or Equipment

7.1 The licensee shall not make any change to the design or equipment that would result in impact on health, safety, or the environment that is different in nature or greater in magnitude than those considered by the safety report, without the prior written approval of the Commission or a person authorized by the Commission.

Preamble

The [Class I Nuclear Facilities Regulations](#) requires that a licence application contain a description of the structures, systems, components, and relevant documentation of facility design.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The licensee is to maintain the physical design of the facility to ensure that the equipment and processes accurately reflect the designed condition as intended in safety analysis (safety report). The licensee shall, prior to implementation of any proposed modification of the facility with the potential to negatively impact protection from fire:

- a) Fire Protection Screening Process can determine the need for a Third Party review based on a risk based approach.
- b) submit the proposed modification for third-party review for compliance with the above fire protection codes and standards;
- c) have the review carried out by one or more independent external reviewers having specific expertise with such reviews; and
- d) submit in writing the results of the review to the Commission, or a person authorized by the Commission.

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In relation to civil structure design, the licensee shall ensure that any new construction is compliant with the National Research Council Canada [NATIONAL BUILDING CODE OF CANADA \(2010\)](#), the National Research Council Canada [NATIONAL FIRE CODE OF CANADA \(2010\)](#) and CSA Standard [N393-13: Fire Protection for Facilities that Process, Handle, or Store Nuclear Substances](#).

In relation to design modifications to existing structures, the licensee shall ensure that the design modifications are compliant with National Research Council Canada [NATIONAL BUILDING CODE OF CANADA \(2010\)](#) and the National Research Council Canada [NATIONAL FIRE CODE OF CANADA \(2010\)](#).

Recommendations and Guidance

None provided

FITNESS FOR SERVICE

The SCA “Fitness for Service” covers activities that impact on the physical condition of systems, components and structures to ensure that they remain effective over time. This includes programs that ensure all equipment is available to perform its intended design function when called upon to do so.

Licence Condition 8.1 – Aging Management

8.1 The licensee shall implement and maintain a Life Management Plan for the maintenance of systems, components and structures for the facility.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence to decommission Class I nuclear facility contain *the proposed measures, policies, methods and procedures for decommissioning the nuclear facility*.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The objective of an aging management plan is to ensure that the condition of critical systems, structures and components related to the safe decommissioning of the facility are understood and that activities have been put in place to assure their safe continued operation as they age. This is accomplished by establishing an integrated set of programs and activities that ensure that performance requirements for all critical systems, structures and components are met on an ongoing basis.

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Recommendations and Guidance

The licensee should develop Life Management Plans for systems and components and an Aging Management Plan for safety-related structures. For guidance, the attributes in Appendix A of CNSC Regulatory Document [RD-334 AGING MANAGEMENT FOR NUCLEAR POWER PLANTS \(2011\)](#) may be referred to. The plans should apply a systematic and integrated approach to establish, implement and improve programs to manage aging and obsolescence of systems, structures and components.

For guidance, the licensee may follow the requirements of CSA Standard [N291-08 REQUIREMENTS FOR SAFETY-RELATED STRUCTURES FOR CANDU NUCLEAR POWER PLANTS \(2008\)](#) or other common industry practices for in-service inspection of the used fuel storage concrete structures and other safety-related civil structures.

RADIATION PROTECTION

The SCA “Radiation Protection” covers the implementation of a radiation protection program in accordance with the *Radiation Protection Regulations*. This program must ensure that contamination and radiation doses received are monitored and controlled.

Licence Condition 9.1 – Radiation Protection

9.1 The licensee shall implement and maintain a radiation protection program.

Preamble

The [Radiation Protection Regulations](#) requires that the licensee implement a radiation protection program and also ascertain and record doses for each person who perform any duties in connection with any activity that is authorized by the [NSCA](#) or is present at a place where that activity is carried on. The Radiation Protection Program must ensure that doses to workers do not exceed prescribed dose limits and are kept As Low As Reasonably Achievable (the ALARA principle), social and economic factors being taken into account.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The licensee must satisfy the requirements of CSA Standard [N286 -05 MANAGEMENT SYSTEM REQUIREMENTS FOR NUCLEAR POWER PLANTS](#) and any other RP related requirements of the standard. This program must ensure that doses to workers do not exceed prescribed dose limits and are kept ALARA.

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Recommendations and Guidance

CNSC Regulatory Document [G-129 KEEPING RADIATION EXPOSURES AND DOSES ‘AS LOW AS REASONABLY ACHIEVABLE \(ALARA\)’ \(2004\)](#) provides guidance for developing, implementing and maintaining a radiation protection program to ensure radiation exposures will be kept ALARA.

Licence Condition 9.2 – Radiation Protection Action Level Reporting

9.2 The licensee shall provide the Commission or a person authorized by the Commission with notification within 7 calendar days of determining that an action level has been reached or exceeded and within 60 days submit a summary written report.

Preamble

Section 6 of the [Radiation Protection Regulations](#) specifies requirements related to “Action Levels” including notification timeframes that may be specified in the licence. This licence condition provides the notification timeframe.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents set out in the documents listed in Section A.4 of this LCH.

For the purposes of the written notification required by this licence condition, the current Action Levels for the Prototype Waste Facilities are given in the following table:

Application	Action Level	Observations
<u>DOSE TO WORKERS</u> Individual worker external radiation dose received during four week period	6 mSv (600 mrem)	The Action Level is exceeded if a person receives an external radiation dose of greater than 6 mSv during a four week period.

CNSC staff will verify that notification is provided by the licensee within the timeframes specified in the licence condition should an action level be reached or exceeded.

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Recommendations and Guidance

Action Levels are designed to alert licensees before regulatory dose limits are reached. By definition, if an action level referred to in a licence is reached, a loss of control of some part of the associated radiation protection program may have occurred, and specific action is required, as defined in the [Radiation Protection Regulations](#) and the licence. Action Levels are not intended to be static and are to reflect operating conditions in the facility. Action Levels are to be reviewed to ensure that they remain meaningful.

The licensee is expected to conduct a documented review and, if necessary, revise Action Levels at least once per licence period in order to validate their effectiveness. The results of such reviews should be provided to the CNSC.

CNSC regulatory guide CNSC Regulatory Document [G-228 DEVELOPING AND USING ACTION LEVELS \(2001\)](#) guides licensees in developing action levels in accordance with the [General Nuclear Safety and Control Regulations](#) and section 6 of the [Radiation Protection Regulations](#).

CONVENTIONAL HEALTH AND SAFETY

The SCA “Conventional Health and Safety” covers the implementation of a program to manage workplace safety hazards and to protect personnel and equipment.

Licence Condition 10.1 – Conventional Health and Safety

10.1 The licensee shall implement and maintain a conventional health and safety program.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence for a Class I nuclear facility, other than a licence to abandon, shall contain *the proposed worker health and safety policies and procedures*.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

Recommendations and Guidance

None Provided

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ENVIRONMENTAL PROTECTION

The SCA “Environmental Protection” covers programs that identify control and monitor all releases of radioactive and hazardous substances and effects on the environment from facilities or as the result of licensed activities.

Licence Condition 11.1 – Environmental Protection

11.1 The licensee shall implement and maintain an environmental protection program.

Preamble

The [Class I Nuclear Facilities Regulations](#) requires that a licence application contain information related to environmental protection while the [General Nuclear Safety and Control Regulations](#) requires every licensee to take all reasonable precautions to protect the environment. The [Radiation Protection Regulations](#) prescribe the radiation dose limits for the general public of 1 mSv per calendar year.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents set out in the documents listed in Section A.4 of this LCH.

The licensee must implement and maintain an Environmental Protection program in accordance with CNSC Regulatory Document [REGDOC-2.9.1: Environmental Protection Policies, Programs and Procedures](#).

Recommendations and Guidance

Guiding principles and factors for CNSC staff consideration are also given in CNSC Regulatory Document [P-223 PROTECTION OF THE ENVIRONMENT \(2001\)](#).

EMERGENCY MANAGEMENT AND FIRE PROTECTION

The SCA “Emergency Management and Fire Protection” covers emergency plans and emergency preparedness programs which exist for emergencies and for non-routine conditions. It also includes any results of exercise participation.

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Licence Condition 12.1 – Emergency Preparedness and Response

12.1 The licensee shall implement and maintain an emergency preparedness and response program.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that a licence application contains information on the licensee’s ‘*proposed measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of security*’.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The criteria set out in the CNSC guidance document CNSC Regulatory Document [G-225 EMERGENCY PLANNING AT CLASS I NUCLEAR FACILITIES AND URANIUM MINES \(2001\)](#) provides guidance for determining the adequacy of emergency plans while CNSC Regulatory Document [RD-353 TESTING AND IMPLEMENTATION OF EMERGENCY MEASURES \(2008\)](#) is used by CNSC staff to determine the adequacy of emergency plans.

Recommendations and Guidance

None Provided

Licence Condition 12.2 – Fire Protection

12.2 The licensee shall implement and maintain a fire protection program.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence to decommission a Class I nuclear facility contain the *proposed measures, methods and procedures for carrying on the decommissioning*. Licensees require a comprehensive fire protection program (the set of planned, coordinated, controlled and documented activities) to ensure the licensed activities do not result in the unreasonable risk to the health and safety of persons and to the environment due to fire from the licensed activity.

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Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and listed in Section A.4 of this LCH.

The compliance expectations are that the licensee’s fire protection program will clearly demonstrate how the requirements of CSA Standard [N393-13: Fire Protection for Facilities that Process, Handle, or Store Nuclear Substances](#), are implemented into the facilities operation in a controlled, consistent and coordinated manner.

Recommendations and Guidance

None provided.

WASTE MANAGEMENT

The SCA “Waste Management” covers internal waste-related programs which form part of the facility’s operations up to the point where the waste is removed from the facility to a separate waste management facility. It also covers the planning for decommissioning.

Licence Condition 13.1 – Waste Management

13.1 The licensee shall implement and maintain a waste management program.

Preamble

The [General Nuclear Safety and Control Regulations](#) requires that a licence application contain information related to the management of radioactive waste or hazardous waste resulting from the licensed activities. The [Class I Nuclear Facilities Regulations](#) requires that a licence application contain the proposed procedures for handling, storing, packaging and transporting nuclear substances and hazardous substances.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The licensee is expected to comply with CSA Standard [N292.2-13 INTERIM DRY STORAGE OF IRRADIATED FUEL](#) and CSA Standard [N292.3-08 MANAGEMENT OF LOW AND INTERMEDIATE-LEVEL RADIOACTIVE WASTE](#).

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The licensee is expected to; characterize its waste streams and minimize the production of all wastes taking into consideration the health and safety of workers and the environment, integrate waste management programs as a key element of the facilities safety culture and regularly audit its program to maximize its efficiency.

CSA Standard [N292.3-08 MANAGEMENT OF LOW AND INTERMEDIATE-LEVEL RADIOACTIVE WASTE](#) provides criteria associated with the management of low and intermediate-level radioactive waste while clause 5.7.3 of this standard requires that a generator of radioactive waste develop a waste management program that includes strategies for waste minimization.

With respect to the storage and management of used nuclear fuel, it should reflect the fundamental safety concerns related to criticality, exposure, heat control, containment and retrievability. That is; the systems that are designed and operated should assure subcriticality, control of radiation exposure, assure heat removal, assure containment and allow retrievability. CSA Standard [N292.2-13 INTERIM DRY STORAGE OF IRRADIATED FUEL](#) provides criteria associated with interim dry storage of irradiated fuel.

Recommendations and Guidance

The CNSC expects that the licensee will implement and audit a facility and waste stream-specific waste management program to control and minimize the volume of radioactive waste generated by the licensed activity. Inclusion of a waste management program is a key component of the licensee’s corporate and safety culture.

Licence Condition 13.2 – Preliminary Decommissioning Plan

13.2 The licensee shall maintain a preliminary decommissioning plan and cost estimate.

Preamble

The [Class I Nuclear Facilities Regulations](#) requires that an application for any licence in respect of a Class I nuclear facility, other than a licence to abandon, shall contain the ‘*proposed plan for decommissioning of the nuclear facility or of the site*’.

Compliance Verification Criteria

The Preliminary Decommissioning Plan is to be kept current to reflect any changes in the site or nuclear facility. The preliminary decommissioning plan is to be reviewed at a minimum every 5 years and revised if necessary, or when required by the Commission or person authorized by the commission. CNSC staff will confirm that the licensee’s preliminary decommissioning plans and cost estimates for the Prototype Reactors are in compliance with the requirements set out in CSA Standard [N294-09 DECOMMISSIONING OF FACILITIES CONTAINING NUCLEAR SUBSTANCES](#). This standard also provides direction on the decommissioning of licensed

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facilities and specifies requirements for the planning, preparation, execution and completion of decommissioning. It incorporates current best practices and existing regulatory requirements. Associated with N294-09 is CNSC Regulatory Document [G-219 DECOMMISSIONING PLANNING FOR LICENSED ACTIVITIES \(2000\)](#). This document provides CNSC staff expectations regarding the preparation of decommissioning plans for activities licensed by the CNSC.

Recommendations and Guidance

CNSC Regulatory Document [G-219 DECOMMISSIONING PLANNING FOR LICENSED ACTIVITIES \(2000\)](#) also provides the basis for calculating financial guarantees discussed in Regulatory Document [G-206 FINANCIAL GUARANTEES FOR THE DECOMMISSIONING OF LICENSED ACTIVITIES \(2000\)](#).

SECURITY

The SCA “Security” covers the programs required to implement and support the security requirements stipulated in the regulations, in their licence, in orders, or in expectations for their facility or activity.

Licence Condition 14.1 – Security

14.1 The licensee shall implement and maintain a security program.

Preamble

The [General Nuclear Safety and Control Regulations](#), the [Class I Nuclear Facilities Regulations](#) and the [Nuclear Security Regulations](#)³ all contain provisions relevant to this SCA as does CSA Standard [N286-05 MANAGEMENT SYSTEM REQUIREMENTS FOR NUCLEAR POWER PLANTS](#). Irradiated fuel is stored at DPWF and G1WF; therefore, these facilities are defined as *high-security sites*. While not defined as a *high-security site*, NPDWF shall have a security program commensurate with the risk presented by the facility to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

³ SOR/2000-209

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Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents set out in the documents listed in Section A.4 of this LCH.

The licensee is to maintain the operation, design and analysis provisions required to ensure adequate engineered safety barriers for the protection against malevolent acts. The provisions for the protection against malevolent acts shall be documented as part of a managed program or process within the management system. The licensee shall summarize changes in design, analysis or operational procedures which are credited for the protection against malevolent acts in the annual threat and risk assessment for DPWF and G1WF, and submit a copy to the Commission.

The licensee shall file an update of the Security Report with the CNSC a minimum of 18 months before the decommissioning licence expires. If the site security program for DPWF or G1WF changes at any time, it must be brought to the attention of the CNSC Director of the Nuclear Security Division. The changes will then be assessed to determine if the report requires an immediate update or if the update can wait until the relicensing review.

Recommendations and Guidance

CNSC Regulatory Document [G-274 SECURITY PROGRAMS FOR CATEGORY I OR II NUCLEAR MATERIAL OR CERTAIN NUCLEAR FACILITIES \(2003\)](#) provides guidance for preparing, submitting and revising the security report. CNSC Regulatory Document [G-208 TRANSPORTATION SECURITY PLANS FOR CATEGORY I, II, OR III NUCLEAR MATERIAL](#) provides guidance on how to prepare and submit a “written transportation security plan” that meets the requirements of Section 5 of the [Nuclear Security Regulations](#).

Guidance may also be obtained in the [IAEA NUCLEAR SECURITY SERIES NO. 4 ENGINEERING SAFETY ASPECTS OF THE PROTECTION OF NUCLEAR POWER PLANTS AGAINST SABOTAGE](#) for maintaining the operation, design and analysis provisions credited in assessments required to ensure adequate engineered safety barriers for the protection against malevolent acts. IAEA Nuclear Security Recommendations [INFCIRC/225/REVISION 5 PHYSICAL PROTECTION OF NUCLEAR MATERIAL AND NUCLEAR FACILITIES](#) also provides guidance for developing and maintaining a security program in accordance with the [Nuclear Security Regulations](#).

CNSC Regulatory Document [RD-321 CRITERIA FOR PHYSICAL PROTECTION SYSTEMS AND DEVICES AT HIGH-SECURITY SITES \(2010\)](#) provides an approach for meeting specific requirements of the [Nuclear Security Regulations](#) aimed at preventing and detecting unauthorized entry into a protected area or inner area at high-security sites. This document further defines the criteria for the purpose of preventing and detecting unauthorized entry into a protected area or inner area at high-security sites.

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CNSC Regulatory Document [RD-361 CRITERIA FOR EXPLOSIVE SUBSTANCE DETECTION, X-RAY IMAGING AND METAL DETECTION DEVICES AT HIGH-SECURITY SITES \(2010\)](#) provides an approach for meeting specific requirements of the [Nuclear Security Regulations](#) aimed at preventing unauthorized entry of weapons and explosive substances into a protected area or inner area at high-security sites. This document further defines the criteria of equipment for the purpose of detecting concealed weapons or explosives at high-security sites. This detection equipment consists of explosive substances detection, X-ray imaging and metal detection devices.

Licence Condition 14.2 – Security Arrangements for Decommissioning

14.2 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that would result in the modifications to the protected area until a submission of the proposed security arrangements and measures has been accepted by the Commission or a person authorized by the Commission.

Preamble

The [General Nuclear Safety and Control Regulations](#), the [Class I Nuclear Facilities Regulations](#) and the [Nuclear Security Regulations](#)⁴ all contain provisions relevant to this Licence condition as does CSA Standard [N286-05 MANAGEMENT SYSTEM REQUIREMENTS FOR NUCLEAR POWER PLANTS](#). Irradiated fuel is stored at DPWF and GIWF; therefore, these facilities are defined as *high-security sites*. While not defined as a *high-security site*, NPDWF shall have a security program commensurate with the risk presented by the facility to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

The decommissioning licence authorizes the Storage with Surveillance activities at the Prototype Waste Facilities. This licence condition requires that the licensee submit the proposed security arrangements and measures for any modifications to the protected area that may be associated with the dismantlement activities prior to receiving CNSC authorization.

CNSC staff will confirm that acceptable security arrangements have been submitted prior to authorizing the licensee to begin subsequent phases of decommissioning.

⁴ SOR/2000-209

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Recommendations and Guidance

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Guidance may also be obtained in the [IAEA NUCLEAR SECURITY SERIES NO. 4 ENGINEERING SAFETY ASPECTS OF THE PROTECTION OF NUCLEAR POWER PLANTS AGAINST SABOTAGE](#) for maintaining the operation, design and analysis provisions credited in assessments required to ensure adequate engineered safety barriers for the protection against malevolent acts. IAEA Nuclear Security Recommendations [INFCIRC/225/REVISION 5 PHYSICAL PROTECTION OF NUCLEAR MATERIAL AND NUCLEAR FACILITIES](#) also provides guidance for developing and maintaining a security program in accordance with the [Nuclear Security Regulations](#).

CNSC Regulatory Document [RD-321 CRITERIA FOR PHYSICAL PROTECTION SYSTEMS AND DEVICES AT HIGH-SECURITY SITES \(2010\)](#) provides an approach for meeting specific requirements of the [Nuclear Security Regulations](#) aimed at preventing and detecting unauthorized entry into a protected area or inner area at high-security sites. This document further defines the criteria for the purpose of preventing and detecting unauthorized entry into a protected area or inner area at high-security sites.

CNSC Regulatory Document [RD-361 CRITERIA FOR EXPLOSIVE SUBSTANCE DETECTION, X-RAY IMAGING AND METAL DETECTION DEVICES AT HIGH-SECURITY SITES \(2010\)](#) provides an approach for meeting specific requirements of the [Nuclear Security Regulations](#) aimed at preventing unauthorized entry of weapons and explosive substances into a protected area or inner area at high-security sites. This document further defines the criteria of equipment for the purpose of detecting concealed weapons or explosives at high-security sites. This detection equipment consists of explosive substances detection, X-ray imaging and metal detection devices.

SAFEGUARDS and NON-PROLIFERATION

The SCA “Safeguards” covers the programs required for the successful implementation of the obligations arising from the Canada/IAEA safeguards agreements.

Safeguards is a system of inspection and other verification activities undertaken by the IAEA in order to evaluate a Member State’s compliance with its obligations pursuant to its safeguards agreements.

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The objective of the Canada/IAEA safeguards agreements is for the IAEA to provide assurance on an annual basis to Canada and to the international community that all declared nuclear materials are in peaceful, non-explosive uses and that there is no indication of undeclared nuclear materials or activities.

Licence Condition 15.1 – Safeguards

15.1 The licensee shall implement and maintain a safeguards program and undertake all measures required to ensure safeguards implementation.

Preamble

The [General Nuclear Safety and Control Regulations](#) and the [Class I Nuclear Facilities Regulations](#) contain provisions relevant to this SCA.

With respect to the implementation of safeguards measures, changes made by the licensee to operations, equipment or procedures as of the result of agreement between the licensee, the CNSC and the IAEA are considered routine. Any changes requested by the licensee to its operations, equipment or procedures not previously agreed to by the CNSC that would affect the implementation of safeguards measures will require prior written approval of the Commission, or a person authorized by the Commission. This approval will ensure that the licensee remains compliant with the regulatory requirements and that Canada can continue to meet its obligations arising from the Canada/IAEA Safeguards Agreement.

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

CANADA’S TREATY COMMITMENTS

- [Treaty on the Non-Proliferation of Nuclear Weapons](#);
- [Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons](#); and
- [Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons](#).

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The licensee must put in place a program and appropriate procedures to ensure that safeguards can be implemented effectively and in a manner consistent with the Canada/IAEA safeguards agreements as they apply to the licensed facility. The Safeguards program is to cover the following provisions:

- The licensee will provide the IAEA, an IAEA inspector, or a person acting on behalf of the IAEA, with such reasonable services and assistance as are required to enable the IAEA to carry out its duties and functions pursuant to a safeguards agreement.
- The licensee will grant prompt access at all reasonable times to all locations at the nuclear facility to an IAEA inspector, or to a person acting on behalf of the IAEA, where such access is required for the purposes of carrying on an activity pursuant to a safeguards agreement. In granting access, the licensee will provide health and safety services and escorts as required in order to facilitate activities pursuant to a safeguards agreement.
- The licensee will disclose to the Commission, to the IAEA, or to an IAEA inspector, any records that are required to be kept or any reports that are required to be made under a safeguards agreement.
- The licensee will provide such reasonable assistance to an IAEA inspector, or to a person acting on behalf of the IAEA, as is required to enable sampling and removal or shipment of samples required pursuant to a safeguards agreement.
- The licensee will provide such reasonable assistance to an IAEA inspector, or to a person acting on behalf of the IAEA, as is required to enable measurements, tests and removal or shipment of equipment required pursuant to a safeguards agreement.
- The licensee will, at the request of the Commission, or of a person authorized by the Commission, install safeguards equipment at the nuclear facility.
- The licensee will permit an IAEA inspector, or a person acting on behalf of the IAEA, to service safeguards equipment at the nuclear facility.
- The licensee will operate safeguards equipment at the nuclear facility in accordance with the methods and procedures specified by the IAEA.
- The licensee will provide the services required for the operation of the safeguards equipment at the nuclear facility, in accordance with the specifications of the IAEA.
- The licensee will not interfere with or interrupt the operation of safeguards equipment at the nuclear facility, or alter, deface or break a safeguards seal, except pursuant to a safeguards agreement.
- The licensee will implement measures to prevent damage to, or the theft, loss or sabotage of safeguards equipment or samples collected pursuant to a safeguards agreement or the illegal use, possession, operation or removal of such equipment or samples.

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- The licensee will make and submit reports to the Commission on the inventory and transfer of fissionable and fertile substances in accordance with the CNSC Regulatory Document [RD-336 ACCOUNTING AND REPORTING OF NUCLEAR MATERIAL \(2010\)](#) or as otherwise stipulated in any regulatory document that replaces it.
- The licensee will make such reports and provide such information to the Commission as are required to facilitate Canada's compliance with any applicable safeguards agreement.

The licensee shall request prior written approval of the Commission, or a person authorized by the Commission, for any changes to operation, equipment or procedures requested by the licensee that would affect the implementation of safeguards measures.

Delegation of approval by the Commission, applies to the following staff with respect to this licence condition: Director General, Directorate of Security and Safeguards, and Vice-President, Technical Support Branch.

Recommendations and Guidance

Guidance may be obtained from CNSC guidance document [GD-336 GUIDANCE FOR “ACCOUNTING AND REPORTING OF NUCLEAR MATERIAL \(2010\)”](#).

PACKAGING AND TRANSPORT

The SCA “Packaging and Transport” covers the safe packaging and transport of nuclear substances and radiation devices to and from the licensed facility.

Licence Condition 16.1 – Packaging and Transportation

16.1 The licensee shall implement and maintain a packaging and transportation program.

Preamble

It is a requirement of the [Class I Nuclear Facilities Regulations](#) that an application for a licence to operate a Class I facility shall contain information on *the proposed procedures for handling, storing, loading and transporting nuclear substances and hazardous substances*. Every person who transports radioactive material, or requires it to be transported, shall act in accordance with the requirements of the [Packaging and Transport of Nuclear Substances Regulations](#).

Compliance Verification Criteria

CNSC staff will verify compliance with this licence condition through the collection of information as set out in Part B of this LCH and against the programs and documents listed in Section A.4 of this LCH.

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The licensee shall implement and maintain a ‘Packaging and Transport’ program that will be in compliance with all the regulatory requirements set out in the Transport Canada [Transportation of Dangerous Goods Regulations](#) and in the CNSC [Packaging and Transport of Nuclear Substances Regulations](#).

Recommendations and Guidance

None provided.

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DEFINITIONS AND ACRONYMS

F.1 DEFINITIONS

Accept	Accept means to indicate compliance with requirements (from <i>CSA N285.0</i>).
Acceptable	Meets regulatory requirements, which means it is in compliance with the verification criteria and regulatory documents or technical standards referenced in the licence condition handbook
Action Level (RPR)	Action level for Radiation Protection means a specific dose of radiation or other parameter that, if reached, may indicate a loss of control of part of a licensee’s radiation protection program and triggers a requirement for specific action to be taken (from <i>Radiation Protection Regulations</i>).
Action Notice	A written notification of a non-compliance with the licensee’s own policies, procedures, or instructions that the licensee has established to meet licensing requirements (including programs and internal processes submitted in support of a licence application).
Approval	Approval means the granting of consent by a regulatory body. Typically used to represent any form of consent from the regulatory body that does not meet the definition of authorization (from <i>IAEA Glossary</i>).
Authorization	Authorization means the granting by a regulatory body or other governmental body of written permission for an operator to perform specified activities. (from <i>IAEA Glossary</i>): <ul style="list-style-type: none"> • Authorization could include, for example, licensing, certification or registration. • The term authorization is also sometimes used to describe the document granting such permission. • Authorization is normally a more formal process than approval.
Defence in depth	The provision of multiple, redundant, nuclear safety provisions to protect workers, the public and the environment from radiological hazards.
Design Basis	Design basis means the range of conditions and events taken into account in the design of the facility, according to established criteria, such that the facility can withstand them without exceeding authorized limits for the planned operation of safety systems.

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Directive	Directive means a written notification of non-compliance with the regulations, licence conditions, codes or standards; or a general or sustained failure to adhere to approved documents, policies, procedures, instructions, programs, or processes that the licensee has established to meet licensing requirements.
Dismantlement	A structured approach for the disassembling of systems, components, or structures.
Graduated Enforcement	Graduated enforcement means the process of issuing and following up on enforcement actions for the purpose of correcting non-compliance with the regulatory framework. Includes confirming, amending or revoking the action if/when applicable; and tracking the licensee's response to the enforcement action.
Hazardous Substance	Hazardous substance or hazardous waste means a substance or waste, other than a nuclear substance, that is used or produced in the course of carrying on a licensed activity and that may pose a risk to the environment or the health and safety of persons (from <i>General Nuclear Safety and Control Regulations</i>).
Licensing Basis	The “licensing basis” for a regulated facility or activity is the information demonstrating that (i) the applicant is qualified to carry out the authorized activity, and (ii) that appropriate provisions are in place for the protection of of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed. The licensing basis consists of (i) the applicable legislative and regulatory requirements, (ii) the facility’s or activity’s license and the documents and conditions cited in that license, and (iii) the license application and the documents submitted in support of that license application (from Harmonized Plan Initiative G 1.7: CNSC Consistent Definition of “Licensing Basis” for all Major Facilities).
Licensing Document	A “licensing document” is a document listed or referred to in a licence issued by the CNSC (from <i>S-99</i>).
Management System	A “management system” is “a set of interrelated or interacting elements (system) for establishing policies and objectives and enabling the objectives to be achieved in an efficient and effective way. The management system integrates all elements of an organization into one coherent system to enable all of the organization’s objectives to be achieved. These elements include the structure, resources and processes (from IAEA Safety Standard GS-R-3 “The Management System for Facilities and Activities”)
Notification	The submission of information by the Licensee to CNSC staff.

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Order	An order is one of the regulatory tools used by the CNSC in carrying out its responsibilities under the Act. It is a powerful legal instrument used to compel someone to do something in the interests of health, safety, the environment, national security or compliance with Canada’s international obligations. An order must be obeyed by the recipient; failure to comply can lead to further regulatory measures, including prosecution or licensing actions. The Act describes the circumstances under which orders can be given, and the <i>CNSC Rules of Procedure</i> set out the procedures for making, reviewing, appealing and redetermining them (from <i>G-273: MAKING, REVIEWING AND RECEIVING ORDERS UNDER THE NUCLEAR SAFETY AND CONTROL ACT</i>).
Person authorized by the Commission	Person authorized by the Commission means the Project Officer overseeing the licensing and compliance activities for the Prototype Waste Facilities, the Director General or Executive Vice-President of the CNSC.
Recommendation	A written suggestion for improvement relating to good industry practice or the promotion of good performance.
Safe Direction	Safe direction means changes in plant safety levels which would not potentially result in: <ul style="list-style-type: none"> - a reduction in any safety margin, - a breakdown of barriers - an increase (in certain parameters) above accepted limits, - an increase in risk, - impairments of special safety systems, - an increase in the risk of radioactive releases or spills of hazardous substances, - injuries to workers or members of the public - introduction of a new hazard - a reduction of the plant's defence in depth provisions.
Shall	For the purpose of this handbook, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with CSA Standard N286-05 MANAGEMENT SYSTEM REQUIREMENTS FOR NUCLEAR POWER PLANTS .

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F.2 ACRONYMS

The following is the list of acronyms used in this document:

AECL	Atomic Energy of Canada Limited
AL	Action Level
ALARA	As Low As Reasonably Achievable
CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
DG	Director General
DNCFR	Directorate of Nuclear Cycle and Facilities Regulation
DPWF	Douglas Point Waste Facility
DSC	Dry Storage Container
EVP ROB	Executive Vice-President Regulatory Operations Branch
G1WF	Gentilly-1 Waste Facility
IAEA	International Atomic Energy Agency
INFCIRC	Information Circular
LC	Licence Condition
LCH	Licence Conditions Handbook
NGS	Nuclear Generating Station
NPDWF	Nuclear Power Demonstration Waste Facility
NRC	National Research Council
NRCan	Natural Resources Canada
NSCA	<i>Nuclear Safety and Control Act</i>
OP&P	Operating Policies and Principles

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OPEX	Operating Experience
PDP	Preliminary Decommissioning Plan
RD	Regulatory Document
RP	Radiation Protection
SCA	Safety and Control Area
WDD	Wastes and Decommissioning Division
WFDL	Waste Facility Decommissioning Licence
WF	Waste Facility
WMF	Waste Management Facility

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PART G: CHANGE REQUEST FORM

Document No. of doc. To be revised (Not E-Doc No.)		000 Current Rev No.	E-Doc File Plan No. 2.01 DCR E-Doc No. #####					
Document Title		##### Document's E-Doc No.						
REVISION REQUEST INFORMATION								
Name Requestor		Division		MM / DD / YY Date of Request				
Name Line Manager		<input type="checkbox"/> Concur with request <input type="checkbox"/> Do Not Concur		Initials				
Description of Problem to be Resolved:								
Proposed Changes:								
Other Documents Potentially Affected by Proposed Changes								
LICENSEE ASSESSMENT OF DCR								
Licensee		<input type="checkbox"/> YES <input type="checkbox"/> NO Proposed Change Acceptable		MM / DD / YY Date				
Assessment Comments:								
SUBJECT MATTER EXPERT (SME) ASSESSMENT OF DCR								
SME		<input type="checkbox"/> YES <input type="checkbox"/> NO Proposed Change Acceptable		MM / DD / YY Date				
Assessment Comments:								
Revisions to be Reviewed by: (Check off all applicable divisions)								
DAA	DERPA	DNCFR	DNSR	SPD	DSM	DSS	FAD	SCD
EDAD	EAD	CRLCLD	OID	CPD	MSD	NSD	ASCD	PMARD
OEAD	ERAD	WDD	NSRDL		PCD	EMPD		
PSARD	RPD		CNFED		HOPD	NPECD		
SED	ECLSD		TLSSD		TPED	ISD		
PFD						SATD		
RBD								
RTD								
AID								